XX
AC ABT35053;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 690.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 114; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 5 A; 3 C; 3 G; 6 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 4.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 566 ATGAAATATCCAGAAC 581
||||||| |||||| |
Db 16 ATGAAATGTCCAGATC 1

SULT 568
T35977
ABT35977 standard; DNA; 17 BP.

ABT35977;

XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 1614.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 221; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 9 A; 2 C; 1 G; 5 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 4.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 999 ATCATAACATAAATTA 1014
||||||| ||| ||||
Db 2 ATCATAAAATACATTA 17

RESULT 569
ABT36351/c
ID ABT36351 standard; DNA; 17 BP.
XX
AC ABT36351;
XX
DT 12-JUN-2003 (first entry)

```
XX
DE   Tumour suppression related human fukutin oligo SEQ ID No 1988.
XX
KW   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW   antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW   schizophrenia; protein chip; gene therapy; tumour suppression;
KW   human fukutin; ds.
XX
OS   Homo sapiens.
XX
PN   WO2003025175-A2.
XX
PD   27-MAR-2003.
XX
PF   17-SEP-2002; 2002WO-IB04208.
XX
PR   17-SEP-2001; 2001FR-0011978.
XX
PA   (MOLE-) MOLECULAR ENGINES LAB.
XX
PI   Telerman A,  Amson R,  Tuijnder M;
XX
DR   WPI; 2003-313353/30.
XX
PT   New isolated nucleic acid, useful for treating viral diseases
PT   associated with tumors and cell degeneration, also related
PT   polypeptides, antibodies and transfected cells  -
XX
PS   Disclosure; Page 265; 720pp; French.
XX
CC   The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC   given in the specification, a sequence containing at least 15
CC   consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC   optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC   sequence that hybridizes to them under highly stringent conditions, or
CC   the complement of any of them, or the corresponding RNA. The novel
CC   isolated nucleic acids of the invention are useful as probes and primers
CC   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC   and for production of recombinant polypeptides. Any of the nucleic acids,
CC   polypeptides, vectors containing the nucleic acids, cells containing the
CC   vector or antibodies directed against the polypeptides are useful for
CC   preparation of pharmaceuticals for prevention and/or treatment of viral
CC   diseases that are characterised by development of tumours or cell
CC   degeneration, specifically cancer but also Alzheimer's disease and
CC   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC   patient samples is useful for diagnosis and/or prognosis of these
CC   diseases. The polypeptides can also be used to generate antibodies, and
CC   both the polypeptide and antibodies are useful as components of protein
CC   chips. The nucleic acid sequences of the invention can be used in gene
CC   therapy. This polynucleotide sequence represents a tumour suppression
CC   related human fukutin oligonucleotide of the invention.
XX
SQ   Sequence 17 BP; 5 A; 2 C; 4 G; 6 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1462 TTATGTACAAATAGAT 1477
              ||||||||| | ||||
Db         17 TTATGTACACACAGAT 2


RESULT 570
ABT36416/c
ID   ABT36416 standard; DNA; 17 BP.
XX
AC   ABT36416;
XX
DT   12-JUN-2003  (first entry)
XX
DE   Tumour suppression related human fukutin oligo SEQ ID No 2053.
XX
KW   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW   antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW   schizophrenia; protein chip; gene therapy; tumour suppression;
KW   human fukutin; ds.
XX
OS   Homo sapiens.
XX
PN   WO2003025175-A2.
XX
PD   27-MAR-2003.
XX
PF   17-SEP-2002; 2002WO-IB04208.
XX
PR   17-SEP-2001; 2001FR-0011978.
XX
PA   (MOLE-) MOLECULAR ENGINES LAB.
XX
PI   Telerman A,  Amson R,  Tuijnder M;
XX
DR   WPI; 2003-313353/30.
XX
PT   New isolated nucleic acid, useful for treating viral diseases
PT   associated with tumors and cell degeneration, also related
PT   polypeptides, antibodies and transfected cells  -
XX
PS   Disclosure; Page 273; 720pp; French.
XX
CC   The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC   given in the specification, a sequence containing at least 15
CC   consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC   optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC   sequence that hybridizes to them under highly stringent conditions, or
CC   the complement of any of them, or the corresponding RNA. The novel
CC   isolated nucleic acids of the invention are useful as probes and primers
CC   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC   and for production of recombinant polypeptides. Any of the nucleic acids,
CC   polypeptides, vectors containing the nucleic acids, cells containing the
CC   vector or antibodies directed against the polypeptides are useful for
CC   preparation of pharmaceuticals for prevention and/or treatment of viral
CC   diseases that are characterised by development of tumours or cell
CC   degeneration, specifically cancer but also Alzheimer's disease and
CC   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC   patient samples is useful for diagnosis and/or prognosis of these
CC   diseases. The polypeptides can also be used to generate antibodies, and
CC   both the polypeptide and antibodies are useful as components of protein
CC   chips. The nucleic acid sequences of the invention can be used in gene
CC   therapy. This polynucleotide sequence represents a tumour suppression
CC   related human fukutin oligonucleotide of the invention.
XX
SQ   Sequence 17 BP; 6 A; 3 C; 3 G; 5 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        744 TTTGCTAGAATGTGAT 759
              | |||| ||||||||
Db         17 TATGCTACAATGTGAT 2


RESULT 571
ABT37756
ID   ABT37756 standard; DNA; 17 BP.
XX
AC   ABT37756;
XX
DT   12-JUN-2003  (first entry)
XX
DE   Tumour suppression related human fukutin oligo SEQ ID No 3393.
XX
KW   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
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antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease; schizophrenia; protein chip; gene therapy; tumour suppression; human fukutin; ds.

Homo sapiens.

WO2003025175-A2.

27-MAR-2003.

17-SEP-2002; 2002WO-IB04208.

17-SEP-2001; 2001FR-0011978.

(MOLE-) MOLECULAR ENGINES LAB.

Telerman A, Amson R, Tuijnder M;

WPI; 2003-313353/30.

New isolated nucleic acid, useful for treating viral diseases associated with tumors and cell degeneration, also related polypeptides, antibodies and transfected cells -

Disclosure; Page 430; 720pp; French.

The invention relates to a novel isolated 17 mer nucleic acid sequence, given in the specification, a sequence containing at least 15 consecutive nucleotides from the 17 mer sequence, a sequence with, after optimal alignment, at least 80 % identity to the 17 mer sequence, a sequence that hybridizes to them under highly stringent conditions, or the complement of any of them, or the corresponding RNA. The novel isolated nucleic acids of the invention are useful as probes and primers for detecting, identifying, quantifying and/or amplifying a nucleic acid, e.g. as one component of a gene chip, in vitro as (anti)sense reagents, and for production of recombinant polypeptides. Any of the nucleic acids, polypeptides, vectors containing the nucleic acids, cells containing the vector or antibodies directed against the polypeptides are useful for preparation of pharmaceuticals for prevention and/or treatment of viral diseases that are characterised by development of tumours or cell degeneration, specifically cancer but also Alzheimer's disease and schizophrenia. Analysis of the expression of the 17 mer nucleic acids in patient samples is useful for diagnosis and/or prognosis of these diseases. The polypeptides can also be used to generate antibodies, and both the polypeptide and antibodies are useful as components of protein chips. The nucleic acid sequences of the invention can be used in gene therapy. This polynucleotide sequence represents a tumour suppression related human fukutin oligonucleotide of the invention.

Sequence 17 BP; 9 A; 3 C; 2 G; 3 T; 0 other;

```
Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

        769 ATCACATAAAAATGAT 784
            ||||||||||  |||
          2 ATCACATAAAACAGAT 17
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SULT 572
T38062
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ABT38062 standard; DNA; 17 BP.

ABT38062;

12-JUN-2003 (first entry)

Tumour suppression related human fukutin oligo SEQ ID No 3699.

Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip; antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease; schizophrenia; protein chip; gene therapy; tumour suppression; human fukutin; ds.

Homo sapiens.

WO2003025175-A2.

27-MAR-2003.

17-SEP-2002; 2002WO-IB04208.

17-SEP-2001; 2001FR-0011978.

(MOLE-) MOLECULAR ENGINES LAB.

Telerman A, Amson R, Tuijnder M;

WPI; 2003-313353/30.

New isolated nucleic acid, useful for treating viral diseases associated with tumors and cell degeneration, also related polypeptides, antibodies and transfected cells -

Disclosure; Page 466; 720pp; French.

The invention relates to a novel isolated 17 mer nucleic acid sequence, given in the specification, a sequence containing at least 15 consecutive nucleotides from the 17 mer sequence, a sequence with, after optimal alignment, at least 80 % identity to the 17 mer sequence, a sequence that hybridizes to them under highly stringent conditions, or the complement of any of them, or the corresponding RNA. The novel isolated nucleic acids of the invention are useful as probes and primers for detecting, identifying, quantifying and/or amplifying a nucleic acid, e.g. as one component of a gene chip, in vitro as (anti)sense reagents, and for production of recombinant polypeptides. Any of the nucleic acids, polypeptides, vectors containing the nucleic acids, cells containing the vector or antibodies directed against the polypeptides are useful for preparation of pharmaceuticals for prevention and/or treatment of viral diseases that are characterised by development of tumours or cell degeneration, specifically cancer but also Alzheimer's disease and schizophrenia. Analysis of the expression of the 17 mer nucleic acids in patient samples is useful for diagnosis and/or prognosis of these diseases. The polypeptides can also be used to generate antibodies, and both the polypeptide and antibodies are useful as components of protein chips. The nucleic acid sequences of the invention can be used in gene therapy. This polynucleotide sequence represents a tumour suppression related human fukutin oligonucleotide of the invention.

Sequence 17 BP; 8 A; 3 C; 3 G; 3 T; 0 other;

```
  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        573 ATCCAGAACATACTTA 588
              |||||||| ||||| |
Db          2 ATCCAGAAGATACTAA 17
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RESULT 573
ABT38413/c
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ABT38413 standard; DNA; 17 BP.

ABT38413;

12-JUN-2003 (first entry)

Tumour suppression related human fukutin oligo SEQ ID No 4050.

Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip; antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease; schizophrenia; protein chip; gene therapy; tumour suppression; human fukutin; ds.

OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 507; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 3 A; 3 C; 2 G; 9 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 4.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1099 AAGATGAATCATTGAT 1114
||||||| ||| |||
Db 17 AAGATGAAACATAGAT 2

RESULT 574
ABT39158/c
ID ABT39158 standard; DNA; 17 BP.
XX
AC ABT39158;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 4795.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 594; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 4 A; 3 C; 2 G; 8 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 4.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1608 GAAACATTTAAAATAT 1623
| |||||||||||| ||
Db 17 GGAACATTTAAAAGAT 2

RESULT 575
ABT39376
ID ABT39376 standard; DNA; 17 BP.
XX
AC ABT39376;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 5013.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX

D 27-MAR-2003.
X
F 17-SEP-2002; 2002WO-IB04208.
X
R 17-SEP-2001; 2001FR-0011978.
K
A (MOLE-) MOLECULAR ENGINES LAB.
K
I Telerman A, Amson R, Tuijnder M;
K
R WPI; 2003-313353/30.
K
T New isolated nucleic acid, useful for treating viral diseases
T associated with tumors and cell degeneration, also related
T polypeptides, antibodies and transfected cells -
K
S Disclosure; Page 620; 720pp; French.
K
C The invention relates to a novel isolated 17 mer nucleic acid sequence,
C given in the specification, a sequence containing at least 15
C consecutive nucleotides from the 17 mer sequence, a sequence with, after
C optimal alignment, at least 80 % identity to the 17 mer sequence, a
C sequence that hybridizes to them under highly stringent conditions, or
C the complement of any of them, or the corresponding RNA. The novel
C isolated nucleic acids of the invention are useful as probes and primers
C for detecting, identifying, quantifying and/or amplifying a nucleic acid,
C e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
C and for production of recombinant polypeptides. Any of the nucleic acids,
C polypeptides, vectors containing the nucleic acids, cells containing the
C vector or antibodies directed against the polypeptides are useful for
C preparation of pharmaceuticals for prevention and/or treatment of viral
C diseases that are characterised by development of tumours or cell
C degeneration, specifically cancer but also Alzheimer's disease and
C schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
C patient samples is useful for diagnosis and/or prognosis of these
C diseases. The polypeptides can also be used to generate antibodies, and
C both the polypeptide and antibodies are useful as components of protein
C chips. The nucleic acid sequences of the invention can be used in gene
C therapy. This polynucleotide sequence represents a tumour suppression
C related human fukutin oligonucleotide of the invention.
C
S Sequence 17 BP; 9 A; 4 C; 1 G; 3 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 4.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1243 ATTTCAGATAAACAAC 1258
|| ||| ||||||||
Db 2 ATCTCAAATAAACAAC 17

RESULT 576
ABT39378
ID ABT39378 standard; DNA; 17 BP.
XX
AC ABT39378;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 5015.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 620; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 5 A; 2 C; 2 G; 8 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 4.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1292 ATCTGAAATTTTAATT 1307
|||| | ||||||||
Db 2 ATCTCAGATTTTAATT 17

RESULT 577
ABT39979/c
ID ABT39979 standard; DNA; 17 BP.
XX
AC ABT39979;
XX
DT 13-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 5616.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX

```
?R   17-SEP-2001; 2001FR-0011978.
?X
?A   (MOLE-) MOLECULAR ENGINES LAB.
?X
?I   Telerman A,  Amson R,  Tuijnder M;
?X
?R   WPI; 2003-313353/30.
?X
?T   New isolated nucleic acid, useful for treating viral diseases
?T   associated with tumors and cell degeneration, also related
?T   polypeptides, antibodies and transfected cells  -
?X
?S   Disclosure; Page 690; 720pp; French.
?X
?C   The invention relates to a novel isolated 17 mer nucleic acid sequence,
?C   given in the specification, a sequence containing at least 15
?C   consecutive nucleotides from the 17 mer sequence, a sequence with, after
?C   optimal alignment, at least 80 % identity to the 17 mer sequence, a
?C   sequence that hybridizes to them under highly stringent conditions, or
?C   the complement of any of them, or the corresponding RNA. The novel
?C   isolated nucleic acids of the invention are useful as probes and primers
?C   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
?C   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
?C   and for production of recombinant polypeptides. Any of the nucleic acids,
?C   polypeptides, vectors containing the nucleic acids, cells containing the
?C   vector or antibodies directed against the polypeptides are useful for
?C   preparation of pharmaceuticals for prevention and/or treatment of viral
?C   diseases that are characterised by development of tumours or cell
?C   degeneration, specifically cancer but also Alzheimer's disease and
?C   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
?C   patient samples is useful for diagnosis and/or prognosis of these
?C   diseases. The polypeptides can also be used to generate antibodies, and
?C   both the polypeptide and antibodies are useful as components of protein
?C   chips. The nucleic acid sequences of the invention can be used in gene
?C   therapy. This polynucleotide sequence represents a tumour suppression
?C   related human fukutin oligonucleotide of the invention.
?X
?Q   Sequence 17 BP; 6 A; 3 C; 2 G; 6 T; 0 other;

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

?y       1462 TTATGTACAAATAGAT 1477
              || |||| ||||||||
?b         17 TTCTGTAGAAATAGAT 2


!ESULT 578
!BT40081
!D   ABT40081 standard; DNA; 17 BP.
!X
!C   ABT40081;
!X
!T   13-JUN-2003  (first entry)
!X
!E   Tumour suppression related human fukutin oligo SEQ ID No 5718.
!X
!W   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
!W   antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
!W   schizophrenia; protein chip; gene therapy; tumour suppression;
!W   human fukutin; ds.
!X
!S   Homo sapiens.
!X
!N   WO2003025175-A2.
!X
!D   27-MAR-2003.
!X
!F   17-SEP-2002; 2002WO-IB04208.
!X
!R   17-SEP-2001; 2001FR-0011978.
!X
```

```
PA   (MOLE-) MOLECULAR ENGINES LAB.
XX
PI   Telerman A,  Amson R,  Tuijnder M;
XX
DR   WPI; 2003-313353/30.
XX
PT   New isolated nucleic acid, useful for treating viral diseases
PT   associated with tumors and cell degeneration, also related
PT   polypeptides, antibodies and transfected cells  -
XX
PS   Disclosure; Page 702; 720pp; French.
XX
CC   The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC   given in the specification, a sequence containing at least 15
CC   consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC   optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC   sequence that hybridizes to them under highly stringent conditions, or
CC   the complement of any of them, or the corresponding RNA. The novel
CC   isolated nucleic acids of the invention are useful as probes and primers
CC   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC   and for production of recombinant polypeptides. Any of the nucleic acids,
CC   polypeptides, vectors containing the nucleic acids, cells containing the
CC   vector or antibodies directed against the polypeptides are useful for
CC   preparation of pharmaceuticals for prevention and/or treatment of viral
CC   diseases that are characterised by development of tumours or cell
CC   degeneration, specifically cancer but also Alzheimer's disease and
CC   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC   patient samples is useful for diagnosis and/or prognosis of these
CC   diseases. The polypeptides can also be used to generate antibodies, and
CC   both the polypeptide and antibodies are useful as components of protein
CC   chips. The nucleic acid sequences of the invention can be used in gene
CC   therapy. This polynucleotide sequence represents a tumour suppression
CC   related human fukutin oligonucleotide of the invention.
XX
SQ   Sequence 17 BP; 6 A; 3 C; 2 G; 6 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1066 ATCAAATATTTGTGCA 1081
              ||||||| ||||| ||
Db          2 ATCAAATCTTTGTACA 17


RESULT 579
ABZ60208
ID   ABZ60208 standard; RNA; 17 BP.
XX
AC   ABZ60208;
XX
DT   21-MAR-2003  (first entry)
XX
DE   Human K-Ras DNAzyme substrate #320.
XX
KW   Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW   enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW   anti-rheumatic; cancer; AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO200297114-A2.
XX
PD   05-DEC-2002.
XX
PF   29-MAY-2002; 2002WO-US16840.
XX
PR   29-MAY-2001; 2001US-294140P.
PR   06-JUN-2001; 2001US-296249P.
PR   10-SEP-2001; 2001US-318471P.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
```

```
{
[   Mcswiggen J;
{
2   WPI; 2003-140484/13.
{
7   Novel short interfering RNA and enzymatic nucleic acid useful for
    treating cancer, modulates the expression of a nucleic acid encoding
    HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences  -

    Claim 58; Page 91; 185pp; English.

    The invention relates to a novel short interfering RNA (siRNA) nucleic
    acid molecule or an enzymatic nucleic acid molecule, that modulates
    expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
    human immunodeficiency virus (HIV) or a component of HIV. The nucleic
    acid molecule of the invention has cytostatic, anti-HIV, and
    anti-rheumatic activity. The nucleic acid molecules are useful for
    reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
    acids are also useful for treating breast, ovarian, colorectal, lung,
    prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
    The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
    ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
    sequences for the human ribozymes of the invention.

    Sequence 17 BP; 8 A; 1 C; 1 G; 7 U; 0 other;

Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
Best Local Similarity   50.0%;  Pred. No. 4.3e+02;
Matches    8;  Conservative    6;  Mismatches    2;  Indels    0;  Gaps    0;

       1176 TTAGATAAATTTCAAT 1191
            ::|||:|||::  | |:
          1 UUAGAUAAAUUACUAU 16


SULT 580
Z60265/c
    ABZ60265 standard; RNA; 17 BP.

    ABZ60265;

    21-MAR-2003  (first entry)

    Human K-Ras DNAzyme substrate #377.

    Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
    enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
    anti-rheumatic; cancer; AIDS; ss.

    Homo sapiens.

    WO200297114-A2.

    05-DEC-2002.

    29-MAY-2002; 2002WO-US16840.

    29-MAY-2001; 2001US-294140P.
    06-JUN-2001; 2001US-296249P.
    10-SEP-2001; 2001US-318471P.

    (RIBO-) RIBOZYME PHARM INC.

    Mcswiggen J;

    WPI; 2003-140484/13.

    Novel short interfering RNA and enzymatic nucleic acid useful for
    treating cancer, modulates the expression of a nucleic acid encoding
    HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences  -

    Claim 58; Page 92; 185pp; English.

CC  The invention relates to a novel short interfering RNA (siRNA) nucleic
CC  acid molecule or an enzymatic nucleic acid molecule, that modulates
CC  expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC  human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC  acid molecule of the invention has cytostatic, anti-HIV, and
CC  anti-rheumatic activity. The nucleic acid molecules are useful for
CC  reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC  acids are also useful for treating breast, ovarian, colorectal, lung,
CC  prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC  The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC  ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC  sequences for the human ribozymes of the invention.
XX
SQ  Sequence 17 BP; 7 A; 0 C; 3 G; 7 U; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        627 CAAATAATTTTTGAAT 642
              |||||||| ||| |||
Db         16 CAAATAATCTTTTAAT 1


RESULT 581
ABZ60471/c
ID  ABZ60471 standard; RNA; 17 BP.
XX
AC  ABZ60471;
XX
DT  21-MAR-2003  (first entry)
XX
DE  Human K-Ras DNAzyme substrate #583.
XX
KW  Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW  enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW  anti-rheumatic; cancer; AIDS; ss.
XX
OS  Homo sapiens.
XX
PN  WO200297114-A2.
XX
PD  05-DEC-2002.
XX
PF  29-MAY-2002; 2002WO-US16840.
XX
PR  29-MAY-2001; 2001US-294140P.
PR  06-JUN-2001; 2001US-296249P.
PR  10-SEP-2001; 2001US-318471P.
XX
PA  (RIBO-) RIBOZYME PHARM INC.
XX
PI  Mcswiggen J;
XX
DR  WPI; 2003-140484/13.
XX
PT  Novel short interfering RNA and enzymatic nucleic acid useful for
PT  treating cancer, modulates the expression of a nucleic acid encoding
PT  HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences  -
XX
PS  Claim 58; Page 96; 185pp; English.
XX
CC  The invention relates to a novel short interfering RNA (siRNA) nucleic
CC  acid molecule or an enzymatic nucleic acid molecule, that modulates
CC  expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC  human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC  acid molecule of the invention has cytostatic, anti-HIV, and
CC  anti-rheumatic activity. The nucleic acid molecules are useful for
CC  reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC  acids are also useful for treating breast, ovarian, colorectal, lung,
CC  prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC  The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC  ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
```

```
C   sequences for the human ribozymes of the invention.
X
Q   Sequence 17 BP; 5 A; 1 C; 2 G; 9 U; 0 other;

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

y       1392 TTAGAACTATTAAAAC 1407
             ||| || |||||||||
b         16 TTACAAGTATTAAAAC 1


ESULT 582
BZ60554/c
D   ABZ60554 standard; RNA; 17 BP.
X
C   ABZ60554;
X
T   21-MAR-2003  (first entry)
X
E   Human K-Ras DNAzyme substrate #666.
X
W   Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
W   enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
W   anti-rheumatic; cancer; AIDS; ss.
X
O   Homo sapiens.
X
N   WO200297114-A2.
X
D   05-DEC-2002.
X
F   29-MAY-2002; 2002WO-US16840.
X
R   29-MAY-2001; 2001US-294140P.
R   06-JUN-2001; 2001US-296249P.
R   10-SEP-2001; 2001US-318471P.
X
A   (RIBO-) RIBOZYME PHARM INC.
X
I   Mcswiggen J;
X
R   WPI; 2003-140484/13.
X
T   Novel short interfering RNA and enzymatic nucleic acid useful for
T   treating cancer, modulates the expression of a nucleic acid encoding
T   HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences  -
X
S   Claim 58; Page 97; 185pp; English.
X
C   The invention relates to a novel short interfering RNA (siRNA) nucleic
C   acid molecule or an enzymatic nucleic acid molecule, that modulates
C   expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
C   human immunodeficiency virus (HIV) or a component of HIV. The nucleic
C   acid molecule of the invention has cytostatic, anti-HIV, and
C   anti-rheumatic activity. The nucleic acid molecules are useful for
C   reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
C   acids are also useful for treating breast, ovarian, colorectal, lung,
C   prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
C   The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
C   ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
C   sequences for the human ribozymes of the invention.
X
Q   Sequence 17 BP; 10 A; 1 C; 1 G; 5 U; 0 other;

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

y        593 TAAAGTATTATTTATT 608
             ||||||||| || |||
b         16 TAAAGTATTTTTCATT 1


RESULT 583
ABZ60733
ID   ABZ60733 standard; RNA; 17 BP.
XX
AC   ABZ60733;
XX
DT   21-MAR-2003  (first entry)
XX
DE   Human K-Ras DNAzyme substrate #845.
XX
KW   Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW   enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW   anti-rheumatic; cancer; AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO200297114-A2.
XX
PD   05-DEC-2002.
XX
PF   29-MAY-2002; 2002WO-US16840.
XX
PR   29-MAY-2001; 2001US-294140P.
PR   06-JUN-2001; 2001US-296249P.
PR   10-SEP-2001; 2001US-318471P.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Mcswiggen J;
XX
DR   WPI; 2003-140484/13.
XX
PT   Novel short interfering RNA and enzymatic nucleic acid useful for
PT   treating cancer, modulates the expression of a nucleic acid encoding
PT   HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences  -
XX
PS   Claim 58; Page 101; 185pp; English.
XX
CC   The invention relates to a novel short interfering RNA (siRNA) nucleic
CC   acid molecule or an enzymatic nucleic acid molecule, that modulates
CC   expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC   human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC   acid molecule of the invention has cytostatic, anti-HIV, and
CC   anti-rheumatic activity. The nucleic acid molecules are useful for
CC   reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC   acids are also useful for treating breast, ovarian, colorectal, lung,
CC   prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC   The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC   ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC   sequences for the human ribozymes of the invention.
XX
SQ   Sequence 17 BP; 9 A; 0 C; 1 G; 7 U; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   50.0%;  Pred. No. 4.3e+02;
  Matches    8;  Conservative    6;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        540 AACAATGAATAGTTTT 555
              || ||: ||:||::::
Db          1 AAAAAUUAAUAGUUUU 16


RESULT 584
ABZ61054
ID   ABZ61054 standard; RNA; 17 BP.
XX
AC   ABZ61054;
XX
DT   21-MAR-2003  (first entry)
XX
DE   Human K-Ras DNAzyme substrate #1166.
```

KW Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW anti-rheumatic; cancer; AIDS; ss.
XX
OS Homo sapiens.
XX
PN WO200297114-A2.
XX
PD 05-DEC-2002.
XX
PF 29-MAY-2002; 2002WO-US16840.
XX
PR 29-MAY-2001; 2001US-294140P.
PR 06-JUN-2001; 2001US-296249P.
PR 10-SEP-2001; 2001US-318471P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J;
XX
DR WPI; 2003-140484/13.
XX
PT Novel short interfering RNA and enzymatic nucleic acid useful for
PT treating cancer, modulates the expression of a nucleic acid encoding
PT HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -
XX
PS Claim 58; Page 107; 185pp; English.
XX
CC The invention relates to a novel short interfering RNA (siRNA) nucleic
CC acid molecule or an enzymatic nucleic acid molecule, that modulates
CC expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC acid molecule of the invention has cytostatic, anti-HIV, and
CC anti-rheumatic activity. The nucleic acid molecules are useful for
CC reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC acids are also useful for treating breast, ovarian, colorectal, lung,
CC prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC sequences for the human ribozymes of the invention.
XX
SQ Sequence 10 BP; 3 A; 3 C; 0 G; 4 U; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 62.5%; Pred. No. 4.3e+02;
Matches 10; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Qy 1604 ATATGAAACATTTAAA 1619
:|:|: ||||:: |||
Db 2 AUAUCAAACAUUAAAA 17

RESULT 585
ABZ61098/c
ID ABZ61098 standard; RNA; 17 BP.
XX
AC ABZ61098;
XX
DT 21-MAR-2003 (first entry)
XX
DE Human K-Ras DNAzyme substrate #1210.
XX
KW Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW anti-rheumatic; cancer; AIDS; ss.
XX
OS Homo sapiens.
XX
PN WO200297114-A2.
XX
PD 05-DEC-2002.
XX
PF 29-MAY-2002; 2002WO-US16840.
XX
PR 29-MAY-2001; 2001US-294140P.
PR 06-JUN-2001; 2001US-296249P.
PR 10-SEP-2001; 2001US-318471P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J;
XX
DR WPI; 2003-140484/13.
XX
PT Novel short interfering RNA and enzymatic nucleic acid useful for
PT treating cancer, modulates the expression of a nucleic acid encoding
PT HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -
XX
PS Claim 58; Page 108; 185pp; English.
XX
CC The invention relates to a novel short interfering RNA (siRNA) nucleic
CC acid molecule or an enzymatic nucleic acid molecule, that modulates
CC expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC acid molecule of the invention has cytostatic, anti-HIV, and
CC anti-rheumatic activity. The nucleic acid molecules are useful for
CC reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC acids are also useful for treating breast, ovarian, colorectal, lung,
CC prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC sequences for the human ribozymes of the invention.
XX
SQ Sequence 17 BP; 4 A; 2 C; 3 G; 8 U; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 43.8%; Pred. No. 4.3e+02;
Matches 7; Conservative 7; Mismatches 2; Indels 0; Gaps 0;

Qy 1051 TGTATTTATTTAAGCA 1066
:|:|:::|:: | |||
Db 2 UGUAUUUAUUCAUGCA 17

RESULT 586
ABZ61149/c
ID ABZ61149 standard; RNA; 17 BP.
XX
AC ABZ61149;
XX
DT 21-MAR-2003 (first entry)
XX
DE Human K-Ras DNAzyme substrate #1261.
XX
KW Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW anti-rheumatic; cancer; AIDS; ss.
XX
OS Homo sapiens.
XX
PN WO200297114-A2.
XX
PD 05-DEC-2002.
XX
PF 29-MAY-2002; 2002WO-US16840.
XX
PR 29-MAY-2001; 2001US-294140P.
PR 06-JUN-2001; 2001US-296249P.
PR 10-SEP-2001; 2001US-318471P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J;
XX
DR WPI; 2003-140484/13.

XX
PT Novel short interfering RNA and enzymatic nucleic acid useful for
PT treating cancer, modulates the expression of a nucleic acid encoding
PT HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -
XX
PS Claim 58; Page 109; 185pp; English.
XX
CC The invention relates to a novel short interfering RNA (siRNA) nucleic
CC acid molecule or an enzymatic nucleic acid molecule, that modulates
CC expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC acid molecule of the invention has cytostatic, anti-HIV, and
CC anti-rheumatic activity. The nucleic acid molecules are useful for
CC reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC acids are also useful for treating breast, ovarian, colorectal, lung,
CC prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC sequences for the human ribozymes of the invention.
XX
SQ Sequence 17 BP; 6 A; 4 C; 2 G; 5 U; 0 other;

```
 Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   87.5%;  Pred. No. 4.3e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        796 TTTTGCCATAAAGTCA 811
              ||||| ||||||| ||
Db         17 TTTTGTCATAAAGGCA 2
```

RESULT 587
ABZ61155
ID ABZ61155 standard; RNA; 17 BP.
XX
AC ABZ61155;
XX
DT 21-MAR-2003 (first entry)
XX
DE Human K-Ras DNAzyme substrate #1267.
XX
KW Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW anti-rheumatic; cancer; AIDS; ss.
XX
OS Homo sapiens.
XX
PN WO200297114-A2.
XX
PD 05-DEC-2002.
XX
PF 29-MAY-2002; 2002WO-US16840.
XX
PR 29-MAY-2001; 2001US-294140P.
PR 06-JUN-2001; 2001US-296249P.
PR 10-SEP-2001; 2001US-318471P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J;
XX
DR WPI; 2003-140484/13.
XX
PT Novel short interfering RNA and enzymatic nucleic acid useful for
PT treating cancer, modulates the expression of a nucleic acid encoding
PT HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -
XX
PS Claim 58; Page 109; 185pp; English.
XX
CC The invention relates to a novel short interfering RNA (siRNA) nucleic
CC acid molecule or an enzymatic nucleic acid molecule, that modulates
CC expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC acid molecule of the invention has cytostatic, anti-HIV, and
CC anti-rheumatic activity. The nucleic acid molecules are useful for
CC reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC acids are also useful for treating breast, ovarian, colorectal, lung,
CC prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC sequences for the human ribozymes of the invention.
XX
SQ Sequence 17 BP; 7 A; 1 C; 0 G; 9 U; 0 other;

```
 Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   43.8%;  Pred. No. 4.3e+02;
 Matches    7;  Conservative    7;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1002 ATAACATAAATTATTT 1017
              |:||||: | ::|:::
Db          1 AUAACAUUAUUUAUUU 16
```

RESULT 588
ABZ61203
ID ABZ61203 standard; RNA; 17 BP.
XX
AC ABZ61203;
XX
DT 21-MAR-2003 (first entry)
XX
DE Human K-Ras DNAzyme substrate #1315.
XX
KW Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW anti-rheumatic; cancer; AIDS; ss.
XX
OS Homo sapiens.
XX
PN WO200297114-A2.
XX
PD 05-DEC-2002.
XX
PF 29-MAY-2002; 2002WO-US16840.
XX
PR 29-MAY-2001; 2001US-294140P.
PR 06-JUN-2001; 2001US-296249P.
PR 10-SEP-2001; 2001US-318471P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J;
XX
DR WPI; 2003-140484/13.
XX
PT Novel short interfering RNA and enzymatic nucleic acid useful for
PT treating cancer, modulates the expression of a nucleic acid encoding
PT HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -
XX
PS Claim 58; Page 110; 185pp; English.
XX
CC The invention relates to a novel short interfering RNA (siRNA) nucleic
CC acid molecule or an enzymatic nucleic acid molecule, that modulates
CC expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC acid molecule of the invention has cytostatic, anti-HIV, and
CC anti-rheumatic activity. The nucleic acid molecules are useful for
CC reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC acids are also useful for treating breast, ovarian, colorectal, lung,
CC prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC sequences for the human ribozymes of the invention.
XX
SQ Sequence 17 BP; 5 A; 1 C; 0 G; 11 U; 0 other;

```
Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
Best Local Similarity   25.0%;  Pred. No. 4.3e+02;
Matches    4;  Conservative   10;  Mismatches    2;  Indels    0;  Gaps    0;

       598 TATTATTTATTTGAAT 613
           :|::|:::|:::  |:
         1 UAUUAUUUAUUUCUAU 16


SULT 589
Z61621
   ABZ61621 standard; RNA; 17 BP.

   ABZ61621;

   21-MAR-2003  (first entry)

   Human H-Ras DNAzyme target #412.

   Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
   enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
   anti-rheumatic; cancer; AIDS; ss.

   Homo sapiens.

   WO200297114-A2.

   05-DEC-2002.

   29-MAY-2002; 2002WO-US16840.

   29-MAY-2001; 2001US-294140P.
   06-JUN-2001; 2001US-296249P.
   10-SEP-2001; 2001US-318471P.

   (RIBO-) RIBOZYME PHARM INC.

   Mcswiggen J;

   WPI; 2003-140484/13.

   Novel short interfering RNA and enzymatic nucleic acid useful for
   treating cancer, modulates the expression of a nucleic acid encoding
   HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences  -

   Claim 58; Page 118; 185pp; English.

   The invention relates to a novel short interfering RNA (siRNA) nucleic
   acid molecule or an enzymatic nucleic acid molecule, that modulates
   expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
   human immunodeficiency virus (HIV) or a component of HIV. The nucleic
   acid molecule of the invention has cytostatic, anti-HIV, and
   anti-rheumatic activity. The nucleic acid molecules are useful for
   reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
   acids are also useful for treating breast, ovarian, colorectal, lung,
   prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
   The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
   ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
   sequences for the human ribozymes of the invention.

   Sequence 17 BP; 3 A; 3 C; 5 G; 6 U; 0 other;

Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
Best Local Similarity   62.5%;  Pred. No. 4.3e+02;
Matches   10;  Conservative    4;  Mismatches    2;  Indels    0;  Gaps    0;

       818 GCTGGAAATCCTGGAT 833
           | :||| |:||:|||:
         2 GUUGGACAUCCUGGAU 17


SULT 590
T43555
```

```
ID   AAT43555 standard; DNA; 18 BP.
XX
AC   AAT43555;
XX
DT   18-JUL-1997  (first entry)
XX
DE   HUMTH01 microsatellite Ep allele PCR primer 5.
XX
KW   Human; Homo sapiens; tyrosine hydroxylase; HUMTH01; schizophrenia;
KW   diagnosis; subtyping; predisposition; polymerase chain reaction; ss.
XX
OS   Synthetic.
XX
PN   WO9634980-A1.
XX
PD   07-NOV-1996.
XX
PF   29-APR-1996;   96WO-FR00650.
XX
PR   03-MAY-1995;   95FR-0005264.
XX
PA   (RHON ) RHONE POULENC RORER SA.
XX
PI   Laurent C,  Mallet J,  Meloni R;
XX
DR   WPI; 1996-506180/50.
XX
PT   Diagnosing schizophrenia by detecting tyrosine hydroxylase Ep allele
PT   - using new PCR primers, also for genetic characterisation and
PT   detection of pre-disposition to schizophrenia
XX
PS   Example 4; Page 10; 30pp; French.
XX
CC   Schizophrenia can be diagnosed by detecting in vitro presence of the
CC   Ep allele of the microsatellite HUMTH01 in the tyrosine hydroxylase
CC   gene. In particular, pairs of primers are used in a polymerase chain
CC   reaction for amplifying a fragment of less than 300 bp comprising
CC   HUMTH01 and a flanking sequence. Specific primer pairs suitable for
CC   amplifying the microsatellite contain primers 1 and 2 (AAT43552 and
CC   AAT43553), primers 1 and 4 (AAT43552 and AAT43554) or primers 5 and 6
CC   (AAT43555 and AAT43556). The method is used for diagnosis, genetic
CC   characterisation and subtyping of schizophrenia and to detect
CC   predisposition to this disease. It may also allow better selection
CC   of treatments for schizophrenia.
XX
SQ   Sequence 18 BP; 1 A; 8 C; 1 G; 8 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         905 GTTTCTCCTTTATTTC 920
               ||| |||| |||||||
Db           1 GTTCCTCCCTTATTTC 16


RESULT 591
AAV60776
ID   AAV60776 standard; DNA; 18 BP.
XX
AC   AAV60776;
XX
DT   25-MAR-2003  (updated)
DT   08-DEC-1998  (first entry)
XX
DE   HIV-1 strain YBF30 pol gene primer YRT2-2.
XX
KW   HIV-1 strain YBF30; antibody; oligonucleotide; diagnosis; immunisation;
KW   infection; typing; pol; PCR primer; amplification; ss.
XX
OS   Synthetic.
OS   Human immunodeficiency virus type 1.
XX
```

```
N   FR2756843-A1.
X
D   12-JUN-1998.
X
F   09-DEC-1996;   96FR-0015087.
X
R   09-DEC-1996;   96FR-0015087.
X
A   (ASSI-) ASSISTANCE PUBLIQUE HOPITAUX PARIS.
A   (INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
A   (INSP ) INST PASTEUR.
X
I   Mauclere P,  Loussert AI,  Simon F,  Saragosti S,  Barre SF;
X
R   WPI; 1998-336114/30.
X
T   Non-M, non-O HIV-1 strain YBF30 - useful for diagnosis and
T   immunisation
X
S   Claim 3; Fig 1; 85pp; French.
X
C   This sequence represents a primer targeted to the pol gene of the non-M
C   (major), non-O (Outlier) HIV-1 strain YBF30 (CNCM I-1753), isolated from
C   the Cameroon.  The HIV strain (see AAV60751 for complete genome),
C   peptides, antibodies and oligonucleotides derived from it (see
C   AAV60752-V60798 and AAW68473-W68482) are used for diagnosis of or
C   immunisation against non-M, non-O HIV-1 infections.  The
C   oligonucleotides, peptides and antibodies can also be used for typing HIV
C   strains.
C   (Updated on 25-MAR-2003 to correct PI field.)
X
Q   Sequence 18 BP; 6 A; 4 C; 4 G; 4 T; 0 other;

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
 Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       410 TATCCAAGAATCAGTG 425
             |||||| ||||||| |
Db         3 TATCCAGGAATCAGAG 18


RESULT 592
AAV49122
ID   AAV49122 standard; DNA; 18 BP.
XX
AC   AAV49122;
XX
DT   15-OCT-1998  (first entry)
XX
DE   rb gene antisense oligonucleotide rb-N-70.
XX
KW   rb gene; antisense oligonucleotide; modulate; gene expression; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   EP856579-A1.
XX
PD   05-AUG-1998.
XX
PF   31-JAN-1997;   97EP-0101531.
XX
PR   31-JAN-1997;   97EP-0101531.
XX
PA   (BIOG-) BIOGNOSTIK GES BIOMOLEKULARE DIAGNOSTIK.
XX
PI   Brysch W,  Schlingensiepen K;
XX
DR   WPI; 1998-400910/35.
XX
PT   Preparation of antisense oligo:nucleotide(s) which lack long runs of
PT   consecutive guanosine or inosine - and have specific ratio of
PT   residues able to form two or three hydrogen bonds, have greater
PT   activity and reduced toxicity, used therapeutically or to modulate
PT   growth of cells in culture
XX
PS   Example 7; Fig 9b; 286pp; English.
XX
CC   AAV49008-236 represent antisense oligonucleotides directed against
CC   the rb gene. Of these, only oligonucleotides AAV49008-52 resulted in
CC   effective downregulation of negative growth control by rb, while
CC   oligonucleotides AAV49052-236 had little effect. The oligonucleotides
CC   exemplify the invention. The specification describes oligonucleotides
CC   that contain 8-30 nucleotides, which contain at most 8 nucleotides
CC   that can each form three hydrogen bonds to cytosine; do not contain
CC   four consecutive nucleotides able to form three H-bonds each to four
CC   consecutive cytosines; do not contain two sequences of three consecutive
CC   nucleotides each able to form three H-bonds to three consecutive
CC   cytosines, and the ratio between residues able to form two H-bonds
CC   each (2R) or three such bonds (3R) is given by 2R/3R = 0.33-0.72. The
CC   oligonucleotides are used to modulate expression of genes, particularly
CC   the genes for p53, ErB-2, junB, junD, TGF-beta 1 or beta 2 to control
CC   proliferation of primary cell cultures (e.g. bone marrow stem, liver or
CC   kidney cells, osteoclasts, osteoblasts and/or keratinocytes). The
CC   oligonucleotides can also be used to analyse function of proteins (by
CC   altering their expression or activity) and therapeutically, e.g. in
CC   cases of cancer or (targeting TGF) for stimulating the immune system.
XX
SQ   Sequence 18 BP; 6 A; 1 C; 1 G; 10 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy      1173 TTATTAGATAAATTTC 1188
             || | ||||||||||
Db         1 TTTTAAGATAAATTTC 16


RESULT 593
AAV36410
ID   AAV36410 standard; cDNA; 18 BP.
XX
AC   AAV36410;
XX
DT   14-SEP-1998  (first entry)
XX
DE   Antisense oligonucleotide 15 directed at DHFR.
XX
KW   Oligonucleotide; Antisense; synthetic; pfmdr;
KW   Plasmodium falciparum multi-drug resistance gene (II); resensitise;
KW   drug-resistant; malaria; mefloquine; quinine; DHFR;
KW   thymidylate synthase; ss.
XX
OS   Synthetic.
OS   PLasmodium falciparum.
XX
PN   WO9821323-A2.
XX
PD   22-MAY-1998.
XX
PF   12-NOV-1997;   97WO-US20590.
XX
PR   12-NOV-1996;   96US-0745485.
XX
PA   (HYBR-) HYBRIDON INC.
PA   (WORC-) WORCESTER FOUND BIOMEDICAL RES.
XX
PI   Baker RH,  Rapaport E,  Zamecnik PC;
XX
DR   WPI; 1998-297928/26.
XX
PT   New synthetic oligo:nucleotide(s) anti-sense to multi-drug
PT   resistance gene of Plasmodium - useful for, e.g. restoring
PT   sensitivity to anti-malarial drugs such as mefloquine and quinine
```

Examples; Page 48; 75pp; English.

Antisense oligonucleotide AAV36410 was used to target the DHFR gene from Plasmodium falciparum. This oligonucleotide corresponds to an internal portion of the 27mer AAV36406 (directed at a conserved sequence in the thymidylate synthase portion of the DHFR gene from bp 1153-1179), which had previously been shown to be highly inhibitory, in vitro, to Plasmodium falciparum. AAV36396-V36404 oligonucleotides were targeted at the pfmdr1 gene bind to the targeted DNA molecule and thereby prevent the normal action of the target molecule. The synthetic oligonucleotides are complementary to pfmdr1 (Plasmodium falciparum multi-drug resistance) gene (II), and are used to resensitise an infectious organism to a drug that had prior become drug-resistant. Therefore the application of these oligonucleotides to the pfmdr1 gene allows the reuse of many anti-malarial drugs.

Sequence 18 BP; 7 A; 2 C; 2 G; 7 T; 0 other;

```
Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

       1259 AAATAATTTTTTAGTA 1274
            ||||||||| || |||
          2 AAATAATTTCTTCGTA 17
```

SULT 594
V36411/c
AAV36411 standard; cDNA; 18 BP.

AAV36411;

14-SEP-1998 (first entry)

Sense oligonucleotide 16 directed at DHFR.

Oligonucleotide; Antisense; synthetic; pfmdr;
Plasmodium falciparum multi-drug resistance gene (II); resensitise;
drug-resistant; malaria; mefloquine; quinine; DHFR;
thymidylate synthase; ss.

Synthetic.
PLasmodium falciparum.

WO9821323-A2.

22-MAY-1998.

12-NOV-1997; 97WO-US20590.

12-NOV-1996; 96US-0745485.

(HYBR-) HYBRIDON INC.
(WORC-) WORCESTER FOUND BIOMEDICAL RES.

Baker RH, Rapaport E, Zamecnik PC;

WPI; 1998-297928/26.

New synthetic oligo:nucleotide(s) anti-sense to multi-drug resistance gene of Plasmodium - useful for, e.g. restoring sensitivity to anti-malarial drugs such as mefloquine and quinine

Examples; Page 48; 75pp; English.

Sense oligonucleotide AAV36411 is complementary to the antisense oligonucleotide AAV36410. It was used to target the DHFR gene from Plasmodium falciparum and served as a sense strand control for sequence specificity. The complementary antisense oligonucleotide AAV36410 corresponds to an internal portion of the 27mer AAV36406 (directed at a conserved sequence in the thymidylate synthase portion of the DHFR gene from bp 1153-1179), which had previously been shown to be highly inhibitory, in vitro, to Plasmodium falciparum. AAV36396-V36404 oligonucleotides were targeted at the pfmdr1 gene bind to the targeted DNA molecule and thereby prevent the normal action of the target molecule. The synthetic oligonucleotides are complementary to pfmdr1 (Plasmodium falciparum multi-drug resistance) gene (II), and are used to resensitise an infectious organism to a drug that had prior become drug-resistant. Therefore the application of these oligonucleotides to the pfmdr1 gene allows the reuse of many anti-malarial drugs.

XX
SQ Sequence 18 BP; 7 A; 2 C; 2 G; 7 T; 0 other;

```
  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1259 AAATAATTTTTTAGTA 1274
              ||||||||| || |||
Db         17 AAATAATTTCTTCGTA 2
```

RESULT 595
AAV34526
ID AAV34526 standard; DNA; 18 BP.
XX
AC AAV34526;
XX
DT 20-AUG-1998 (first entry)
XX
DE Chemokine receptor CXCR4 amplifying RT-PCR primer 2.
XX
KW Chemokine receptor; gp120; fusion protein; HIV; screening; AIDS;
KW CD4 binding site; RT-PCR primer; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN WO9815569-A1.
XX
PD 16-APR-1998.
XX
PF 08-OCT-1997; 97WO-US18397.
XX
PR 09-OCT-1996; 96US-0027931.
XX
PA (CHIL-) CHILDRENS MEDICAL CENT.
PA (DAND) DANA FARBER CANCER INST INC.
PA (LEUK-) LEUKOSITE INC.
XX
PI Gerard C, Gerard N, Newman W, Sodroski J, Wu L;
XX
DR WPI; 1998-240778/21.
XX
PT Derivatives of gp120 containing modified chemokine receptor binding
PT site - and complexes with soluble CD40, for inhibiting infectivity
PT of human immune deficiency virus and to screen for inhibitors
XX
PS Examples; Page 53; 92pp; English.
XX
CC This primer is used for the RT-PCR amplification of a chemokine receptor
CC CXCR4. The invention provides gp120 derivative having a conformational,
CC discontinuous chemokine receptor binding site defined by amino acids
CC residues present in the gp120 constant regions C2, C3 and C4, and the
CC variable region V3, and its conformation is similar to that of the
CC receptor binding site of wild-type gp120 complexed to CD4. Exposure of
CC the chemokine receptor binding site is increased by having at least part
CC of a variable or constant region of wild-type gp120 removed. A stabilised
CC complex of gp120 CD4 binding site with a soluble CD4 molecule is used to
CC inhibit infectivity of human immune deficiency virus (HIV). Labelled
CC gp120 derivatives are also used to screen for inhibitors of HIV
CC infectivity. The gp120 derivatives are used for diagnosing susceptibility
CC to HIV infection from increased levels of the chemokine receptors (at the
CC protein or nucleic acid levels). Transgenic animals expressing CD4 and

C chemokine receptor are used as models for studying development of AIDS or
C effect/safety of therapeutic agents.
X
Q Sequence 18 BP; 4 A; 4 C; 7 G; 3 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

y 485 GTTGTAGGGTTGCCAG 500
||||||||| |||||
b 1 GTTGTAGGGCAGCCAG 16

ESULT 596
AZ41004/c
D AAZ41004 standard; DNA; 18 BP.
X
C AAZ41004;
X
T 26-JAN-2000 (first entry)
X
E Human RhoC phosphorothioate antisense oligonucleotide SEQ ID NO:156.
X
W Identification; genetic target; gene modulation; human; probe;
W antisense oligonucleotide; phosphorothioate; PCR primer;
W nucleotide sequence-based technology; antisense drug discovery;
W target validation; ss.
X
S Synthetic.
S Homo sapiens.
X
N WO9953101-A1.
X
D 21-OCT-1999.
X
F 13-APR-1999; 99WO-US08268.
X
R 13-APR-1998; 98US-0081483.
R 28-APR-1998; 98US-0067638.
X
A (ISIS-) ISIS PHARM INC.
X
I Cowsert LM, Baker BF, McNeil J, Freier SM, Sasmor HM, Brooks DG;
I Ohasi C, Wyatt JR, Borchers AH, Vickers TA;
X
R WPI; 1999-620446/53.
X
T Identifying compounds which modulate expression of nucleic acids, used
T to provide compounds having defined physical, chemical or bioactive
T properties, e.g. antisense activity -
X
S Example 18; Page 97; 264pp; English.
X
C A method has been developed of defining a set of compounds that modulate
C the expression of a target nucleic acid (tNA) sequence via binding of
C the compounds with the tNA sequence. The method comprises generating a
C library of virtual compounds in silico according to defined criteria,
C and evaluating in silico the binding of the virtual compounds with the
C tNA according to defined criteria. Also described are: (1) a method of
C defining a set of oligonucleotides (ONs) that modulate the expression of
C a tNA sequence via binding of the ONs with the tNA sequence comprising
C generating a library of virtual compounds in silico according to defined
C criteria, and evaluating in silico the binding of the virtual ONs with
C the tNA according to defined criteria; and (2) a method of defining a
C set of compounds that modulate the expression of a tNA sequence via
C binding of the compounds with the tNA. The methods can be used for the
C generation and identification of synthetic compounds having defined
C physical, chemical or bioactive properties. Information gathered from
C assays of such compounds is used to identify nucleic acid sequences that
C are tractable to a variety of nucleotide sequence-based technologies,
C e.g. antisense drug discovery and target validation. AAZ40852 to
C AAZ41220, and AAY52701 to AAY52706, represent sequences used in the
CC exemplification of the present invention.
XX
SQ Sequence 18 BP; 7 A; 5 C; 4 G; 2 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 827 CCTGGATTTTTTTCTG 842
|||||| || ||||||
Db 18 CCTGGAGTTGTTTCTG 3

RESULT 597
AAX56787/c
ID AAX56787 standard; DNA; 18 BP.
XX
AC AAX56787;
XX
DT 14-JUL-1999 (first entry)
XX
DE WO9922023 probe 23.
XX
KW Microorganism; hybridisation; probe; identification; detection;
KW bacteria; milk; water; automated; ss.
XX
OS Synthetic.
XX
PN WO9922023-A2.
XX
PD 06-MAY-1999.
XX
PF 29-OCT-1998; 98WO-EP06863.
XX
PR 29-OCT-1997; 97DE-1047731.
XX
PA (MIRA-) MIRA DIAGNOSTICA GMBH.
XX
PI Epping B, Leiser M;
XX
DR WPI; 1999-303024/25.
XX
PT Identifying specific microorganisms present in a mixture
XX
PS Claim 1; Page 8; 19pp; German.
XX
CC This invention describes the detection of specific microorganisms from
CC various taxa, in a sample containing several different microorganisms by
CC nucleic acid hybridization, using as probes, 62 specific
CC oligonucleotides (represented in AAX56765-X56826) with at least one
CC oligonucleotide being able to hybridize to each microorganism. The method
CC is useful for detecting and identifying bacteria in milk and water. The
CC method, which may be fully automated, allows simultaneous detection and
CC unequivocal identification of bacteria from different taxa.
XX
SQ Sequence 18 BP; 5 A; 5 C; 3 G; 5 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 726 TTTCAGGAATTGAATG 741
|||||||||| | |||
Db 17 TTTCAGGAATCGCATG 2

RESULT 598
AAX37761/c
ID AAX37761 standard; DNA; 18 BP.
XX
AC AAX37761;
XX
DT 09-JUL-1999 (first entry)

XX
DE Staphylococcus sp. detecting oligonucleotide fsq2s.
XX
KW FemA; primer; identification; detection; therapy; infection; femB;
KW amplification; genotyping; gram-positive bacteria; vaccine; ss.
XX
OS Synthetic.
OS Staphylococcus sp.
XX
PN WO9916780-A2.
XX
PD 08-APR-1999.
XX
PF 28-SEP-1998; 98WO-BE00141.
XX
PR 26-SEP-1997; 97EP-0870146.
XX
PA (BENA-) BELGIAN MIN NAT DEFENCE.
PA (UYLO-) UNIV CATHOLIQUE LOUVAIN.
XX
PI Gala J, Vannuffel P;
XX
DR WPI; 1999-287521/24.
XX
PT New Staphylococcus-specific oligonucleotides
XX
PS Claim 5; Page 8; 48pp; English.
XX
CC This invention describes novel Staphylococcus-specific oligonucleotides
CC based on the consensus femA nucleotide sequence which are used to
CC develop products for the identification, detection and therapy of
CC infections. The oligonucleotides can be used for the genetic
CC amplification, the identification and/or quantification of various femA
CC sequences which are specific to known or unknown Staphylococci species.
CC Since the femA sequence is similar to the femB sequence, the
CC oligonucleotides can also be used for the molecular genotyping of femB
CC genes of different Staphylococci species or other gram-positive bacteria.
CC The femA nucleic acids can also be used in therapeutic applications.
CC They can also be used to identify inhibitors, e.g. antibodies or
CC antisense oligonucleotides, for blocking expression of the femA
CC nucleotide sequences. They can also be used for producing vaccines
CC against Staphylococci infections.
XX
SQ Sequence 18 BP; 12 A; 1 C; 3 G; 2 T; 0 other;

```
Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1562 ATTTTTTTTACTGTTT 1577
             ||||||| |||| |||
Db         16 ATTTTTTGTACTTTTT 1
```

RESULT 599
AAV82030/c
ID AAV82030 standard; DNA; 18 BP.
XX
AC AAV82030;
XX
DT 21-JUN-1999 (first entry)
XX
DE Moraxella lactoferrin binding protein 1 (Lbp1) PCR primer.
XX
KW Lactoferrin receptor; lactoferrin binding protein; Lbp1;
KW lbpA gene; infection; otitis media; sinusitis; conjunctivitis;
KW pneumonia; bronchitis; tracheitis; emphysema; diagnosis; therapy;
KW vaccine; Branhamella catarrhalis; PCR; primer; ss.
XX
OS Synthetic.
OS Moraxella catarrhalis.
XX
PN WO9855606-A2.
XX
PD 10-DEC-1998.
XX
PF 02-JUN-1998; 98WO-CA00544.
XX
PR 08-MAY-1998; 98US-0074658.
PR 03-JUN-1997; 97US-0867941.
XX
PA (CONN-) CONNAUGHT LAB LTD.
XX
PI Du R, Klein MH, Loosmore SM, Wang Q, Yang Y;
XX
DR WPI; 1999-070266/06.
XX
PT Lactoferrin receptor genes from Moraxella, especially M. catarrhalis
PT - useful to diagnose Moraxella infection e.g. to detect otitis media
PT due to M. catarrhalis infection and to immunise against such
PT infections
XX
PS Example 1; Page 37; 202pp; English.
XX
CC This PCR primer is based on a C-terminal peptide (see AAW89423) of
CC Moraxella catarrhalis lactoferrin binding protein 1 (Lbp1). PCR
CC primers (see AAV82030-31) based on this C-terminal peptide and other
CC primers (see AAV82022-29) based on an isolated N-terminal peptide,
CC are used in the amplification of M. catarrhalis lbpA genes that
CC code for Lbp1. The invention provides immunogenic compositions,
CC including vaccines, based upon expressed recombinant Lbp1 and/or
CC Lbp2 and/or ORF3 proteins (see AAW89413-21) for use in the prevention
CC of diseases (e.g. otitis media) caused by Moraxella. The genes and
CC DNA sequences of the Moraxella lactoferrin receptor (lfr) locus
CC (see AAV82019-21) are useful for diagnosis, immunisation, and the
CC generation of diagnostic and immunological reagents.
XX
SQ Sequence 18 BP; 7 A; 1 C; 3 G; 7 T; 0 other;

```
Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1233 TTAAATTTTCATTTCA 1248
              ||||| |||||||||
Db         18 TTAAAACTTCATTTCA 3
```

RESULT 600
AAV82031
ID AAV82031 standard; DNA; 18 BP.
XX
AC AAV82031;
XX
DT 21-JUN-1999 (first entry)
XX
DE Moraxella lactoferrin binding protein 1 (Lbp1) PCR primer.
XX
KW Lactoferrin receptor; lactoferrin binding protein; Lbp1;
KW lbpA gene; infection; otitis media; sinusitis; conjunctivitis;
KW pneumonia; bronchitis; tracheitis; emphysema; diagnosis; therapy;
KW vaccine; Branhamella catarrhalis; PCR; primer; ss.
XX
OS Synthetic.
OS Moraxella catarrhalis.
XX
PN WO9855606-A2.
XX
PD 10-DEC-1998.
XX
PF 02-JUN-1998; 98WO-CA00544.
XX
PR 08-MAY-1998; 98US-0074658.
PR 03-JUN-1997; 97US-0867941.
XX
PA (CONN-) CONNAUGHT LAB LTD.

```
CX
PI   Du R,  Klein MH,  Loosmore SM,  Wang Q,  Yang Y;
CX
DR   WPI; 1999-070266/06.
CX
PT   Lactoferrin receptor genes from Moraxella, especially M. catarrhalis
PT   - useful to diagnose Moraxella infection e.g. to detect otitis media
PT   due to M. catarrhalis infection and to immunise against such
PT   infections
CX
PS   Example 1; Page 37; 202pp; English.
CX
CC   This PCR primer is based on a C-terminal peptide (see AAW89423) of
CC   Moraxella catarrhalis lactoferrin binding protein 1 (Lbp1).  PCR
CC   primers (see AAV82030-31) based on this C-terminal peptide and other
CC   primers (see AAV82022-29) based on an isolated N-terminal peptide,
CC   are used in the amplification of M. catarrhalis lbpA genes that
CC   code for Lbp1.  The invention provides immunogenic compositions,
CC   including vaccines, based upon expressed recombinant Lbp1 and/or
CC   Lbp2 and/or ORF3 proteins (see AAW89413-21) for use in the prevention
CC   of diseases (e.g. otitis media) caused by Moraxella.  The genes and
CC   DNA sequences of the Moraxella lactoferrin receptor (lfr) locus
CC   (see AAV82019-21) are useful for diagnosis, immunisation, and the
CC   generation of diagnostic and immunological reagents.
CX
SQ   Sequence 18 BP; 7 A; 3 C; 1 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1233 TTAAATTTTCATTTCA 1248
              ||||| ||||||||
Db          1 TTAAAACTTCATTTCA 16


RESULT 601
AAX27574
ID   AAX27574 standard; DNA; 18 BP.
XX
AC   AAX27574;
XX
DT   27-MAY-1999  (first entry)
XX
DE   RT-PCR primer RT-NTRNA7.
XX
KW   Influenza antigen; fusion product; extracellular; membrane protein;
KW   M2 protein; vaccine; human; animal; pig; horse; RT-PCR; primer; ss.
XX
OS   Synthetic.
XX
PN   WO9907839-A2.
XX
PD   18-FEB-1999.
XX
PF   05-AUG-1998;   98WO-EP05106.
XX
PR   05-AUG-1997;   97EP-0202434.
XX
PA   (VLAA-) VLAAMS INTERUNIVERSITAIR INST BIOTECHNOG.
XX
PI   Fiers W,  Min Jou W,  Neirynck S;
XX
DR   WPI; 1999-167418/14.
XX
PT   New influenza antigens for use in vaccines  - comprising a fusion
PT   product of the extracellular part of a conserved influenza membrane
PT   protein and a presenting carrier
XX
PS   Disclosure; Fig 29; 100pp; English.
XX
CC   The invention relates to new influenza antigens that comprise a fusion
CC   product of at least the extracellular part of a conserved influenza
CC   membrane protein (or a functional fragment) and a presenting carrier.
CC   The membrane protein consists of the extracellular part of the influenza
CC   M2 protein. The influenza antigens can be used in the preparation of a
CC   vaccine against influenza for humans and animals, e.g. pigs and horses.
CC   The vaccines can be direct vaccines, e.g. vaccines containing the fusion
CC   products or indirect, DNA vaccines.
XX
SQ   Sequence 18 BP; 7 A; 0 C; 6 G; 5 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1155 TAGATATTAAATGATG 1170
              |||||||| || ||||
Db          3 TAGATATTGAAAGATG 18


RESULT 602
AAZ70894/c
ID   AAZ70894 standard; DNA; 18 BP.
XX
AC   AAZ70894;
XX
DT   10-SEP-2001  (first entry)
XX
DE   Human biallelic marker upstream amplification primer SEQ ID NO:5250.
XX
KW   Human genome; biallelic marker; high density disequilibrium map;
KW   genomic map; haplotype; phenotype; polymorphic base; genotyping;
KW   haplotyping; hybridisation; identification; characterisation;
KW   amplification; single nucleotide polymorphism; SNP; PCR primer;
KW   diagnosis; ss.
XX
OS   Homo sapiens.
XX
PN   WO9954500-A2.
XX
PD   28-OCT-1999.
XX
PF   21-APR-1999;   99WO-IB00822.
XX
PR   21-APR-1998;   98US-0082614.
PR   23-NOV-1998;   98US-0109732.
XX
PA   (GEST ) GENSET.
XX
PI   Cohen D,  Blumenfeld M,  Chumakov I;
XX
DR   WPI; 2000-013267/01.
XX
PT   Novel biallelic markers used to construct a high density disequilibrium
PT   map of the human genome  -
XX
PS   Claim 8; Page 1350; 2745pp; English.
XX
CC   AAZ65654 to AAZ69578 represent human biallelic markers from the present
CC   invention, which contain a polymorphic base at position 24 of their
CC   nucleotide sequences. AAZ69579 to AAZ77440 represent amplification
CC   primers for the biallelic markers. The biallelic markers of the
CC   invention have a variety of uses: they can be used for high density
CC   mapping of the human genome, and in complex association studies and
CC   haplotyping studies which are useful in determining the genetic basis
CC   for disease states. Compositions and methods of the invention can also
CC   be useful for the identification of the targets for the development of
CC   pharmaceutical agents and diagnostic methods, as well as the
CC   characterisation of the differential efficacious responses to and side
CC   effects from pharmaceutical agents acting on a disease as well as other
CC   treatment.
CC   N.B. The SEQ ID NOs 2852, 2913, 2974, 3035, 3096, 3157, 3217, 3297
CC   and 3367, are not actually given a sequence in the Sequence Listing
CC   from the present invention.
XX
```

) Sequence 18 BP; 6 A; 6 C; 3 G; 3 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

' 820 TGGAAATCCTGGATTT 835
|||||| ||||| |||
) 17 TGGAAAGCCTGGTTTT 2

SULT 603
AZ71730
) AAZ71730 standard; DNA; 18 BP.
[
: AAZ71730;
[
: 10-SEP-2001 (first entry)
[
: Human biallelic marker upstream amplification primer SEQ ID NO:6086.
[
: Human genome; biallelic marker; high density disequilibrium map;
: genomic map; haplotype; phenotype; polymorphic base; genotyping;
: haplotyping; hybridisation; identification; characterisation;
: amplification; single nucleotide polymorphism; SNP; PCR primer;
: diagnosis; ss.
:
: Homo sapiens.
:
: WO9954500-A2.
:
) 28-OCT-1999.
:
' 21-APR-1999; 99WO-IB00822.
:
: 21-APR-1998; 98US-0082614.
: 23-NOV-1998; 98US-0109732.
:
: (GEST) GENSET.
[
: Cohen D, Blumenfeld M, Chumakov I;
[
: WPI; 2000-013267/01.
[
: Novel biallelic markers used to construct a high density disequilibrium
: map of the human genome -
[
: Claim 8; Page 1528; 2745pp; English.
[
: AAZ65654 to AAZ69578 represent human biallelic markers from the present
: invention, which contain a polymorphic base at position 24 of their
: nucleotide sequences. AAZ69579 to AAZ77440 represent amplification
: primers for the biallelic markers. The biallelic markers of the
: invention have a variety of uses: they can be used for high density
: mapping of the human genome, and in complex association studies and
: haplotyping studies which are useful in determining the genetic basis
: for disease states. Compositions and methods of the invention can also
: be useful for the identification of the targets for the development of
: pharmaceutical agents and diagnostic methods, as well as the
: characterisation of the differential efficacious responses to and side
: effects from pharmaceutical agents acting on a disease as well as other
: treatment.
: N.B. The SEQ ID NOs 2852, 2913, 2974, 3035, 3096, 3157, 3227, 3297
: and 3367, are not actually given a sequence in the Sequence Listing
: from the present invention.
[
) Sequence 18 BP; 2 A; 2 C; 6 G; 8 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

' 1566 TTTTTACTGTTTCTGA 1581
| |||||||||||| ||
Db 1 TGTTTACTGTTTCGGA 16

RESULT 604
AAA86605/c
ID AAA86605 standard; DNA; 18 BP.
XX
AC AAA86605;
XX
DT 04-DEC-2000 (first entry)
XX
DE Cdc 2 kinase hammerhead ribozyme recognitoin site #36.
XX
KW Ribozyme; hairpin; hammerhead; gene therapy; vasotropic;
KW restenosis; ss.
XX
OS Mammalia.
XX
PN WO200032765-A2.
XX
PD 08-JUN-2000.
XX
PF 06-DEC-1999; 99WO-US28772.
XX
PR 04-DEC-1998; 98US-0110954.
XX
PA (IMMU-) IMMUSOL INC.
XX
PI Tritz R, Welch PJ, Barber JR, Robbins JM;
XX
DR WPI; 2000-412314/35.
XX
PT New hairpin and hammerhead ribozyme for inhibiting restenosis, cleaves
PT RNA encoding a cyclin or cell-cycle dependent kinase other than CDK1,
PT PCNA and Cyclin B1 -
XX
PS Example 1; Page 18; 109pp; English.
XX
CC The present invention relates to a hairpin or hammerhead ribozyme,
CC designed to cleave RNA encoding a cyclin or cell-cycle dependent kinase
CC other than cell-cycle dependent kinases CDK1, PCNA and Cyclin B1.
CC Representative examples of ribozyme recognition sites are given in
CC AAA82415 to AAA86787. The ribozyme of the invention is useful for
CC inhibiting restenosis by introduction of the ribozyme into cells.
CC The ribozyme is resistant to endonuclease activity and hence is
CC efficient in restenosis treatment.
XX
SQ Sequence 18 BP; 6 A; 2 C; 3 G; 7 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1173 TTATTAGATAAATTTC 1188
||| |||| |||||||
Db 18 TTAATAGAGAAATTTC 3

RESULT 605
AAA86607/c
ID AAA86607 standard; DNA; 18 BP.
XX
AC AAA86607;
XX
DT 04-DEC-2000 (first entry)
XX
DE Cdc 2 kinase hammerhead ribozyme recognitoin site #38.
XX
KW Ribozyme; hairpin; hammerhead; gene therapy; vasotropic;
KW restenosis; ss.
XX
OS Mammalia.

CX
PN WO200032765-A2.
CX
PD 08-JUN-2000.
CX
PF 06-DEC-1999; 99WO-US28772.
CX
PR 04-DEC-1998; 98US-0110954.
CX
PA (IMMU-) IMMUSOL INC.
CX
PI Tritz R, Welch PJ, Barber JR, Robbins JM;
CX
DR WPI; 2000-412314/35.
CX
PT New hairpin and hammerhead ribozyme for inhibiting restenosis, cleaves
PT RNA encoding a cyclin or cell-cycle dependent kinase other than CDK1,
PT PCNA and Cyclin B1 -
CX
PS Example 1; Page 18; 109pp; English.
CX
CC The present invention relates to a hairpin or hammerhead ribozyme,
CC designed to cleave RNA encoding a cyclin or cell-cycle dependent kinase
CC other than cell-cycle dependent kinases CDK1, PCNA and Cyclin B1.
CC Representative examples of ribozyme recognition sites are given in
CC AAA82415 to AAA86787. The ribozyme of the invention is useful for
CC inhibiting restenosis by introduction of the ribozyme into cells.
CC The ribozyme is resistant to endonuclease activity and hence is
CC efficient in restenosis treatment.
CX
SQ Sequence 18 BP; 7 A; 2 C; 2 G; 7 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1172 TTTATTAGATAAATTT 1187
|||| |||| ||||||
Db 16 TTTAATAGAGAAATTT 1

RESULT 606
AAA86759/c
ID AAA86759 standard; DNA; 18 BP.
CX
AC AAA86759;
CX
DT 04-DEC-2000 (first entry)
CX
DE Cdc 2 kinase hammerhead ribozyme recognitoin site #190.
CX
KW Ribozyme; hairpin; hammerhead; gene therapy; vasotropic;
KW restenosis; ss.
CX
OS Mammalia.
CX
PN WO200032765-A2.
CX
PD 08-JUN-2000.
CX
PF 06-DEC-1999; 99WO-US28772.
CX
PR 04-DEC-1998; 98US-0110954.
CX
PA (IMMU-) IMMUSOL INC.
CX
PI Tritz R, Welch PJ, Barber JR, Robbins JM;
CX
DR WPI; 2000-412314/35.
CX
PT New hairpin and hammerhead ribozyme for inhibiting restenosis, cleaves
PT RNA encoding a cyclin or cell-cycle dependent kinase other than CDK1,
PT PCNA and Cyclin B1 -
XX
PS Example 1; Page 23; 109pp; English.
XX
CC The present invention relates to a hairpin or hammerhead ribozyme,
CC designed to cleave RNA encoding a cyclin or cell-cycle dependent kinase
CC other than cell-cycle dependent kinases CDK1, PCNA and Cyclin B1.
CC Representative examples of ribozyme recognition sites are given in
CC AAA82415 to AAA86787. The ribozyme of the invention is useful for
CC inhibiting restenosis by introduction of the ribozyme into cells.
CC The ribozyme is resistant to endonuclease activity and hence is
CC efficient in restenosis treatment.
XX
SQ Sequence 18 BP; 7 A; 3 C; 3 G; 5 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 795 ATTTTGCCATAAAGTC 810
|||||||| ||| ||
Db 18 ATTTTGCCAGAAATTC 3

RESULT 607
AAA10824/c
ID AAA10824 standard; DNA; 18 BP.
XX
AC AAA10824;
XX
DT 14-JUL-2000 (first entry)
XX
DE G-alpha-i1 antisense oligonucleotide ISIS# 25742.
XX
KW G-alpha-i1; G protein; adenylyl cyclase hormonal inhibition; tumour;
KW plasma membrane regulation; antisense composition; treatment; prevent;
KW delay; infection; inflammation; tumour formation; research; diagnose; ss.
XX
OS Synthetic.
XX
PN US6046321-A.
XX
PD 04-APR-2000.
XX
PF 09-APR-1999; 99US-0289377.
XX
PR 09-APR-1999; 99US-0289377.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Cowsert LM;
XX
DR WPI; 2000-292434/25.
XX
PT New antisense compounds targeting nucleic acids encoding human
PT G-alpha-i1 useful for modulating G-alpha-i1 expression and for treating
PT diseases associated with G-alpha-i1 expression -
XX
PS Claim 3; Column 38; 31pp; English.
XX
CC Human G-alpha-i1 is a member of the Gi subfamily of G proteins which is
CC involved in hormonal inhibition of adenylyl cyclase and in the
CC regulation of plasma membrane enzymes. The expression of G-alpha-i1 is
CC altered in some tumours. The present sequence is a G-alpha-i1 antisense
CC oligonucleotide, which can be used to inhibit the expression of human
CC G-alpha-i1. The invention relates to antisense oligonucleotides
CC represented in AAA10814-A10853, which can be used in the treatment of
CC diseases or condition associated with the expression of G-alpha-i1 by
CC modulating the expression of G-alpha-i1 in cells or tissues. The
CC antisense compositions may also be used prophylactically, e.g. to
CC prevent or delay infection, inflammation, or tumour formation.
CC Furthermore, the antisense oligonucleotides may also be useful in
CC research and diagnostics, e.g. in detecting nucleic acids encoding
CC G-alpha-i1 by conjugation of an enzyme to the oligonucleotide, or

```
CC   radiolabelling the oligonucleotide. Kits using such detection means for
CC   detecting the level of G-alpha-i1 in the sample may also be prepared.
CC   Antisense oligonucleotides, which are able to inhibit specific gene
CC   expression, are often used to elucidate the function of particular genes.
CC   These antisense compounds are also used to distinguish between functions
CC   of various members of a biological pathway.
CX
SQ   Sequence 18 BP; 8 A; 3 C; 2 G; 5 T; 0 other;

  Query Match              1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1486 TATTATTTAAATGACT 1501
              || ||||| |||||||
Db         18 TACTATTTGAATGACT 3


RESULT 608
AAZ91449/c
ID   AAZ91449 standard; DNA; 18 BP.
XX
AC   AAZ91449;
XX
DT   22-MAY-2000  (first entry)
XX
DE   Human Ship-2 phosphorothioate antisense oligonucleotide #30731.
XX
KW   Human; Ship-2; antisense oligonucleotide; phosphorothioate; detection;
KW   inhibition; SH2-containing phosphatidylinositol phosphatase-2; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   modified_base    1..18
FT                    /*tag=  a
FT                    /note= "phosphorothioate linkages"
XX
PN   US6025198-A.
XX
PD   15-FEB-2000.
XX
PF   25-JUN-1999;   99US-0339964.
XX
PR   25-JUN-1999;   99US-0339964.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Bennett CF,  Cowsert LM;
XX
DR   WPI; 2000-181819/16.
XX
PT   Antisense oligonucleotides, useful for inhibiting human Ship-2
PT   expression and for detecting nucleic acids encoding Ship-2  -
XX
PS   Example 15; Column 40; 34pp; English.
XX
CC   The present invention describes phosphorothioate antisense
CC   oligonucleotides that specifically hybridise with, and inhibit the
CC   expression of, nucleic acids encoding human Ship-2 (also called
CC   SH2-containing phosphatidylinositol phosphatase-2). Also described
CC   is a method of inhibiting the expression of Ship-2 in human cells
CC   or tissues in vitro comprising contacting the cells with the
CC   phosphorothioate antisense oligonucleotides. The phosphorothioate
CC   antisense oligonucleotides can be used to treat animals (especially
CC   humans) suspected of having or being prone to a disease or condition
CC   associated with Ship-2 expression. The present sequence represents
CC   a phosphorothioate antisense oligonucleotide for human Ship-2, from
CC   the present invention.
XX
SQ   Sequence 18 BP; 8 A; 6 C; 3 G; 1 T; 0 other;

  Query Match              1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        469 TGTATTGTGTGGGTCT 484
              ||| ||||||||||
Db         16 TGTTCTGTGTGGGTCT 1


RESULT 609
AAZ37341/c
ID   AAZ37341 standard; DNA; 18 BP.
XX
AC   AAZ37341;
XX
DT   04-FEB-2000  (first entry)
XX
DE   Interleukin-15 antisense inhibitor ISIS# 24333.
XX
KW   Interleukin-15; IL-15; antisense inhibitor; untranslated region; 5'UTR;
KW   3'UTR; human; infection; inflammation; tumour; therapy; diagnosis; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   US5985663-A.
XX
PD   16-NOV-1999.
XX
PF   25-NOV-1998;   98US-0200141.
XX
PR   25-NOV-1998;   98US-0200141.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Bennett CF,  Cowsert LM;
XX
DR   WPI; 2000-022283/02.
XX
PT   Antisense compound useful for inhibiting human interleukin-15
PT   expression useful for treating diseases associated with interleukin-15
PT   expression -
XX
PS   Claim 3; Column 40; 31pp; English.
XX
CC   This sequence is an example of an antisense compound of the invention.
CC   The antisense compounds are targeted to a 5' or 3' untranslated region
CC   (5'UTR or 3'UTR) of a nucleic acid molecule encoding human interleukin-15
CC   (IL-15), and inhibit the expression of human IL-15. The antisense
CC   inhibitors are is useful for inhibiting expression of IL-15 in human
CC   cells or tissues in vitro, for treating humans or other animals suspected
CC   of having or being prone to a disease associated with IL-15 expression,
CC   e.g. infections, inflammation or tumours. The inhibitors can also be used
CC   for research or diagnostic purposes. Using antisense compounds
CC   specifically and effectively inhibits IL-15 function.
XX
SQ   Sequence 18 BP; 4 A; 3 C; 8 G; 3 T; 0 other;

  Query Match              1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1339 CTTGTCATTGCCAGCT 1354
              |||| ||| |||||||
Db         16 CTTGCCATAGCCAGCT 1


RESULT 610
AAH61771/c
ID   AAH61771 standard; DNA; 18 BP.
XX
AC   AAH61771;
XX
DT   10-SEP-2001  (first entry)
```

```
XX
DE   Cdc 2 kinase hammerhead ribozyme recognition site SEQ ID NO:4195.
XX
KW   Human; ribozyme therapy; hairpin ribozyme; hammerhead ribozyme;
KW   recognition site; target; ribozyme binding site; eye disease; vulnerary;
KW   proliferative disease; skin disease; psoriasis; diabetic retinopathy;
KW   cytokine; inflammation; cell-cycle dependent kinase; cyclin; MMP;
KW   matrix metalloproteinase; growth factor; reductase; scarring; cytostatic;
KW   antipsoriatic; dermatological; antiseborrheic; antidiabetic; virucide;
KW   antisickling; ophthalmological; keratolytic; gene therapy; viral wart;
KW   atopic dermatitis; actinic keratosis; squamous cell carcinoma;
KW   basal cell carcinoma; seborrheic wart; vitreoretinopathy; scar;
KW   sickle cell retinopathy; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200130362-A2.
XX
PD   03-MAY-2001.
XX
PF   26-OCT-2000; 2000WO-US29500.
XX
PR   26-OCT-1999;   99US-0161532.
XX
PA   (IMMU-) IMMUSOL INC.
XX
PI   Robbins JM,  Tritz R;
XX
DR   WPI; 2001-300427/31.
XX
PT   Treating proliferative skin or eye diseases and scarring, using
PT   ribozymes that cleave RNA encoding cytokines involved in inflammation,
PT   matrix metalloproteinases, growth factors and cell-cycle dependent
PT   kinases -
XX
PS   Disclosure; Page 378; 408pp; English.
XX
CC   The present invention describes a method for treating a proliferative
CC   skin or eye disease and scarring. The method involves administering a
CC   ribozyme (I) which cleaves RNA encoding a cytokine involved in
CC   inflammation, matrix metalloproteinase (MMP), cyclin, cell-cycle
CC   dependent kinase, growth factor or a reductase, or administering a
CC   nucleic acid molecule (II) comprising a promoter operably linked to a
CC   nucleic acid segment encoding (I). (I) can have antipsoriatic,
CC   dermatological, cytostatic, antiseborrheic, antidiabetic, antisickling,
CC   ophthalmological, vulnerary, keratolytic and virucide activities, and
CC   cleaves RNA encoding cytokine involved in inflammation. (I) can be used
CC   in gene therapy. (I) and (II) are useful for treating proliferative
CC   skin diseases such as psoriasis, atopic dermatitis, actinic keratosis,
CC   squamous or basal cell carcinoma and viral or seborrheic wart. They can
CC   also be used for treating proliferative eye diseases such as diabetic
CC   retinopathy, vitreoretinopathy, sickle cell retinopathy, retinopathy of
CC   prematurity and retinal detachment, and for treating and preventing
CC   scarring such as keloid, adhesion and hypertrophic or hypertrophic burn
CC   scar. AAH57577 to AAH62099 represent sequences used in the
CC   exemplification of the present invention.
XX
SQ   Sequence 18 BP; 6 A; 2 C; 3 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1173 TTATTAGATAAATTTC 1188
              ||| |||| |||||||
Db         18 TTAATAGAGAAATTTC 3


RESULT 611
AAH61773/c
ID   AAH61773 standard; DNA; 18 BP.
XX
AC   AAH61773;
XX
DT   10-SEP-2001  (first entry)
XX
DE   Cdc 2 kinase hammerhead ribozyme recognition site SEQ ID NO:4197.
XX
KW   Human; ribozyme therapy; hairpin ribozyme; hammerhead ribozyme;
KW   recognition site; target; ribozyme binding site; eye disease; vulnerary;
KW   proliferative disease; skin disease; psoriasis; diabetic retinopathy;
KW   cytokine; inflammation; cell-cycle dependent kinase; cyclin; MMP;
KW   matrix metalloproteinase; growth factor; reductase; scarring; cytostatic;
KW   antipsoriatic; dermatological; antiseborrheic; antidiabetic; virucide;
KW   antisickling; ophthalmological; keratolytic; gene therapy; viral wart;
KW   atopic dermatitis; actinic keratosis; squamous cell carcinoma;
KW   basal cell carcinoma; seborrheic wart; vitreoretinopathy; scar;
KW   sickle cell retinopathy; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200130362-A2.
XX
PD   03-MAY-2001.
XX
PF   26-OCT-2000; 2000WO-US29500.
XX
PR   26-OCT-1999;   99US-0161532.
XX
PA   (IMMU-) IMMUSOL INC.
XX
PI   Robbins JM,  Tritz R;
XX
DR   WPI; 2001-300427/31.
XX
PT   Treating proliferative skin or eye diseases and scarring, using
PT   ribozymes that cleave RNA encoding cytokines involved in inflammation,
PT   matrix metalloproteinases, growth factors and cell-cycle dependent
PT   kinases -
XX
PS   Disclosure; Page 378; 408pp; English.
XX
CC   The present invention describes a method for treating a proliferative
CC   skin or eye disease and scarring. The method involves administering a
CC   ribozyme (I) which cleaves RNA encoding a cytokine involved in
CC   inflammation, matrix metalloproteinase (MMP), cyclin, cell-cycle
CC   dependent kinase, growth factor or a reductase, or administering a
CC   nucleic acid molecule (II) comprising a promoter operably linked to a
CC   nucleic acid segment encoding (I). (I) can have antipsoriatic,
CC   dermatological, cytostatic, antiseborrheic, antidiabetic, antisickling,
CC   ophthalmological, vulnerary, keratolytic and virucide activities, and
CC   cleaves RNA encoding cytokine involved in inflammation. (I) can be used
CC   in gene therapy. (I) and (II) are useful for treating proliferative
CC   skin diseases such as psoriasis, atopic dermatitis, actinic keratosis,
CC   squamous or basal cell carcinoma and viral or seborrheic wart. They can
CC   also be used for treating proliferative eye diseases such as diabetic
CC   retinopathy, vitreoretinopathy, sickle cell retinopathy, retinopathy of
CC   prematurity and retinal detachment, and for treating and preventing
CC   scarring such as keloid, adhesion and hypertrophic or hypertrophic burn
CC   scar. AAH57577 to AAH62099 represent sequences used in the
CC   exemplification of the present invention.
XX
SQ   Sequence 18 BP; 7 A; 2 C; 2 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1172 TTTATTAGATAAATTT 1187
              |||| |||| ||||||
Db         16 TTTAATAGAGAAATTT 1


RESULT 612
```

```
AAH61925/c
ID   AAH61925 standard; DNA; 18 BP.
XX
AC   AAH61925;
XX
DT   10-SEP-2001  (first entry)
XX
DE   Cdc 2 kinase hammerhead ribozyme recognition site SEQ ID NO:4349.
XX
KW   Human; ribozyme therapy; hairpin ribozyme; hammerhead ribozyme;
KW   recognition site; target; ribozyme binding site; eye disease; vulnerary;
KW   proliferative disease; skin disease; psoriasis; diabetic retinopathy;
KW   cytokine; inflammation; cell-cycle dependent kinase; cyclin; MMP;
KW   matrix metalloproteinase; growth factor; reductase; scarring; cytostatic;
KW   antipsoriatic; dermatological; antiseborrheic; antidiabetic; virucide;
KW   antisickling; ophthalmological; keratolytic; gene therapy; viral wart;
KW   atopic dermatitis; actinic keratosis; squamous cell carcinoma;
KW   basal cell carcinoma; seborrheic wart; vitreoretinopathy; scar;
KW   sickle cell retinopathy; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200130362-A2.
XX
PD   03-MAY-2001.
XX
PF   26-OCT-2000; 2000WO-US29500.
XX
PR   26-OCT-1999;   99US-0161532.
XX
PA   (IMMU-) IMMUSOL INC.
XX
PI   Robbins JM,  Tritz R;
XX
DR   WPI; 2001-300427/31.
XX
PT   Treating proliferative skin or eye diseases and scarring, using
PT   ribozymes that cleave RNA encoding cytokines involved in inflammation,
PT   matrix metalloproteinases, growth factors and cell-cycle dependent
PT   kinases -
XX
PS   Disclosure; Page 392; 408pp; English.
XX
CC   The present invention describes a method for treating a proliferative
CC   skin or eye disease and scarring. The method involves administering a
CC   ribozyme (I) which cleaves RNA encoding a cytokine involved in
CC   inflammation, matrix metalloproteinase (MMP), cyclin, cell-cycle
CC   dependent kinase, growth factor or a reductase, or administering a
CC   nucleic acid molecule (II) comprising a promoter operably linked to a
CC   nucleic acid segment encoding (I). (I) can have antipsoriatic,
CC   dermatological, cytostatic, antiseborrheic, antidiabetic, antisickling,
CC   ophthalmological, vulnerary, keratolytic and virucide activities, and
CC   cleaves RNA encoding cytokine involved in inflammation. (I) can be used
CC   in gene therapy. (I) and (II) are useful for treating proliferative
CC   skin diseases such as psoriasis, atopic dermatitis, actinic keratosis,
CC   squamous or basal cell carcinoma and viral or seborrheic wart. They can
CC   also be used for treating proliferative eye diseases such as diabetic
CC   retinopathy, vitreoretinopathy, sickle cell retinopathy, retinopathy of
CC   prematurity and retinal detachment, and for treating and preventing
CC   scarring such as keloid, adhesion and hypertrophic or hypertrophic burn
CC   scar. AAH57577 to AAH62099 represent sequences used in the
CC   exemplification of the present invention.
XX
SQ   Sequence 18 BP; 7 A; 3 C; 3 G; 5 T; 0 other;

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
 Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        795 ATTTTGCCATAAAGTC 810
              ||||||||| ||| ||
Db         18 ATTTTGCCAGAAATTC 3
```

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RESULT 613
AAF94725/c
ID   AAF94725 standard; DNA; 18 BP.
XX
AC   AAF94725;
XX
DT   23-MAY-2001  (first entry)
XX
DE   Rho C antisense phosphorothioate oligonucleotide SEQ ID 149.
XX
KW   Rho; GTP binding protein; phosphorothioate antisense oligonucleotide;
KW   RhoA; RhoB; RhoC; RhoG; Rac 1; cdc42; hyperproliferative condition;
KW   cancer; wound healing; clotting; ischaemia; reperfusion; reoxygenation;
KW   ss.
XX
OS   Homo sapiens.
XX
PN   WO200115739-A1.
XX
PD   08-MAR-2001.
XX
PF   18-AUG-2000; 2000WO-US22808.
XX
PR   31-AUG-1999;   99US-0387341.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Roberts ML,  Cowsert LM;
XX
DR   WPI; 2001-191677/19.
XX
PT   An antisense compound targeted to a nucleic acid molecule encoding a
PT   member of the human Rho family of small GTP binding proteins useful for
PT   treating e.g. cancer and ischaemia -
XX
PS   Example 16; Page 73; 156pp; English.
XX
CC   This invention relates to an antisense compound targeted to a nucleic
CC   acid molecule encoding a member of the human Rho family of small GTP
CC   binding proteins, where the antisense compound inhibits the expression of
CC   the member of the human Rho family. The invention includes antisense
CC   oligonucleotides AAF94580 - AAF94637 which target a RhoA nucleotide
CC   sequence, AAF94645 - AAF94684 which target a RhoB nucleotide sequence,
CC   AAF94686 - AAF94725 which target a RhoC nucleotide sequence, AAF94727 -
CC   AAF94766 which target RhoG nucleotide sequence, AAF94769 - AAF94790 which
CC   target a Rac 1 nucleotide sequence and AAF94795 - AAF94809 which target
CC   cdc42 nucleotide sequence. The antisense compound is useful for treating
CC   hyperproliferative conditions, especially cancer, abnormal wound healing
CC   or clotting conditions and ischaemia/reperfusion or reoxygenation injury.
CC   The compound may also be used to diagnose the above conditions.
XX
SQ   Sequence 18 BP; 7 A; 5 C; 4 G; 2 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        827 CCTGGATTTTTTCTG 842
              ||||| || ||||||
Db         18 CCTGGAGTTGTTTCTG 3
```

```
RESULT 614
AAF60098/c
ID   AAF60098 standard; DNA; 18 BP.
XX
AC   AAF60098;
XX
DT   30-APR-2001  (first entry)
XX
DE   Primer T-PA2.
```

```
CX
CW   Primer; micro-organ cultures; MOC; hepatic; renal; ss.
CX
OS   Unidentified.
CX
PN   WO200107098-A2.
CX
PD   01-FEB-2001.
CX
PF   19-JUL-2000; 2000WO-IL00424.
CX
PR   23-JUL-1999;   99US-0145095.
PR   25-OCT-1999;   99US-0425233.
CX
PA   (YISS ) YISSUM RES DEV CO HEBREW UNIV JERUSALEM.
CX
PI   Mitrani E;
CX
DR   WPI; 2001-168510/17.
CX
PT   Artificial organ, useful for providing hepatic or renal functions,
PT   comprises micro-organ cultures within extra- or intra-corporeal device
PT   -
CX
PS   Example 29; Page 79; 152pp; English.
CX
CC   The present invention relates to a device for performing biological
CC   modification of a fluid. The invention has a chamber, with inlet and
CC   outlet, that contains a collection of micro-organ cultures (MOC) for
CC   performing the modification on fluid passing through the chamber. In
CC   each MOC, the deepest cells are 100-225 micro m away from the nearest
CC   surface of MOC, so that the in vivo architecture of the organ is
CC   maintained in each MOC. The invention is used to provide hepatic
CC   and/or renal functions.
CX
SQ   Sequence 18 BP; 2 A; 4 C; 5 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        496 GCCAGATGCAATACAA 511
              ||| || |||||||||
Db         18 GCCTGAGGCAATACAA 3


RESULT 615
AAI98549
ID   AAI98549 standard; DNA; 18 BP.
XX
AC   AAI98549;
XX
DT   30-NOV-2001  (first entry)
XX
DE   Genomic DNA methylation state detecting oligonucleotide SEQ ID 388.
XX
KW   Peptide nucleic acid; PNA; detection; methylation; cytosine;
KW   gene expression regulation; ss.
XX
OS   Unidentified.
XX
PN   WO200168910-A2.
XX
PD   20-SEP-2001.
XX
PF   15-MAR-2001; 2001WO-DE01089.
XX
PR   15-MAR-2000; 2000DE-1013847.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Berlin K;
XX
DR   WPI; 2001-596913/67.
XX
PT   Parallel detection of methylation in genomic DNA where DNA is
PT   chemically modified, fragmented, amplified and hybridized to probes,
PT   useful to investigate gene expression regulation  -
XX
PS   Example 1; Page 98; 116pp; German.
XX
CC   This sequence represents a novel method for the parallel detection of
CC   cytosine methylation in genomic DNA comprising: (a) chemically treating a
CC   DNA sample so that 5' unmethylated cytosine is converted to
CC   uracil/thymidine; (b) amplifying the sample up to 10 different fragments,
CC   each less than 2000 base pairs (bp) using synthetic primers; (c)
CC   hybridizing the amplified sequence to an oligonucleotide or PNA-oligomer
CC   containing at least two sequences fully defined in the specification and
CC   (d) detecting hybridization. The invention is used in the investigation
CC   of regulation of gene expression by methylation. AAI98162-AAI98557
CC   represents oligonucleotide sequences used to illustrate the method of the
CC   invention.
XX
SQ   Sequence 18 BP; 4 A; 0 C; 3 G; 11 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1143 TTTATTTTATTTTAGA 1158
              |||| || ||||||||
Db          3 TTTAGTTGATTTTAGA 18


RESULT 616
ABL59915/c
ID   ABL59915 standard; DNA; 18 BP.
XX
AC   ABL59915;
XX
DT   22-JUL-2002  (first entry)
XX
DE   Mined element RESite oligonucleotide #12.
XX
KW   RESite; related to empty site; identification; transposon; genotyping;
KW   nucleic acid database; DNA fingerprinting; genetic engineering; MITE;
KW   miniature inverted-repeat transposable element; mapping; ss.
XX
OS   Synthetic.
XX
PN   WO200163540-A2.
XX
PD   30-AUG-2001.
XX
PF   26-FEB-2001; 2001WO-CA00251.
XX
PR   24-FEB-2000; 2000US-0184650.
XX
PA   (UYMC-) UNIV MCGILL.
XX
PI   Bureau T;
XX
DR   WPI; 2001-565451/63.
XX
PT   Determining a value indicating nucleic acid (NA) being a transposon
PT   from NA database, by comparing target site NA and both leading and
PT   trailing flanking region sequence between potential transposon and its
PT   match  -
XX
PS   Disclosure; Fig 1A; 31pp; English.
XX
CC   The present invention describes a method for determining a value
CC   indicative of a nucleic acid (NA) sequence being a transposon (Tn), by
CC   identifying the location in a NA database where a potential Tn (I) to be
CC   identified may be found, selecting flanking region sequence (FRS) of (I),
CC   searching the database for a match of the FRS, comparing a target site
```

```
C   NA sequence and both leading and trailing FRS between (I) and the match,
C   and determining value as result of previous step. The method can be used
C   for determining a value indicative of a NA sequence being a transposon.
C   The transposons identified by the method can be used to genotype a NA
C   sequence using PCR (polymerase chain reaction) or hybridisation based
C   protocols and sequences unique to the mined transposons. The transposons
C   can also be used in fingerprinting or linkage studies, isolation of novel
C   genes, producing mutated or knockout genes, and delivery of engineered
C   genes. A copia-like retro transposon, PDR1, is successfully used to study
C   polymorphisms. Miniature inverted-repeat transposable elements (MITEs)
C   are used in a novel technology called inter-MITE polymorphism as mapping
C   and fingerprinting tools in barley. The method is accurate, efficient,
C   and allows high throughput identification of transposons compared to the
C   use of standard genetic and molecular biological approaches. The
C   transposon sequences discovered by the method greatly outnumber all of
C   the plant transposon sequences previously reported. The present sequence
C   represents a mined element RESite (related to empty site) oligonucleotide
C   which is used in the exemplification of the present invention.
C
C   Sequence 18 BP; 7 A; 1 C; 2 G; 8 T; 0 other;

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
 Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1593 TATAAAAGTAAATATG 1608
             |||||| ||||||||
Db         18 TATAAATCTAAATATG 3


RESULT 617
ABS54314
ID   ABS54314 standard; DNA; 18 BP.
XX
AC   ABS54314;
XX
DT   05-DEC-2002  (first entry)
XX
DE   P. falciparum DHFR gene antisense oligonucleotide 281.
XX
KW   Anti-drug resistant infectious agent; resensitising drug resistance;
KW   anti-infectious drug; drug resistant phenotype; Plasmodium; parasite;
KW   anti-malarial drug resistance; mefloquine; quinine; chloroquine;
KW   pfmdr1 gene; protozoacide; dihydrofolate reductase-thymidylate synthase;
KW   DHFR; ss.
XX
OS   Plasmodium falciparum.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1..18
FT                   /*tag=  a
FT                   /mod_base= OTHER
FT                   /note= "OTHER= phosphorothioate internucleotide
FT                         linkages"
XX
PN   US6440660-B1.
XX
PD   27-AUG-2002.
XX
PR   27-AUG-2002.
XX
PR   12-NOV-1996;   96US-0745485.
XX
PR   18-APR-1996;   96US-0634588.
PR   17-NOV-1995;   95US-0560474.
XX
PA   (HYBR-) HYBRIDON INC.
PA   (WORC-) WORCHESTER FOUND BIOMEDICAL RES.
XX
PI   Barker RH,  Rapaport E,  Zamecnik PC;
XX
DR   WPI; 2002-711526/77.
XX
PT   Resensitising drug-resistant infectious organism to anti-infectious
PT   organism drug, comprises use of synthetic oligonucleotide comprising a
PT   sequence complementary to nucleic acid required for drug-resistant
PT   phenotype -
XX
PS   Examples; Column 21; 26pp; English.
XX
CC   The present invention relates to methods of resensitising an
CC   anti-drug resistant infectious agent to a drug. The method
CC   comprises culturing the infectious organism with antisense
CC   oligonucleotides with a sequence complementary to the nucleic acid
CC   required for drug resistance. The method is useful for resensitising
CC   drug resistant infectious organisms to anti-infectious drugs,
CC   thereby reversing the drug resistant phenotype of the organism. The
CC   method is useful for resensitising an anti-malarial drug resistant
CC   Plasmodium parasite to an anti-malarial drug, which involves culturing
CC   the parasite in the presence of an antisense oligonucleotide, to
CC   enable the oligonucleotide to hybridise to the nucleic acid and
CC   contacting and culturing the parasite with an anti-malarial drug such
CC   as mefloquine, quinine, chloroquine or its derivatives, in the presence
CC   of the oligonucleotide. Preferably, the parasite is contacted and
CC   cultured with mefloquine or quinine. The antisense oligonucleotide is
CC   useful for down-regulating the expression of the pfmdr1 gene. By
CC   down-regulating the expression of Pfmdr1 gene, the antisense
CC   oligonucleotide reverses the mefloquine-resistant phenotype of the
CC   parasites, thus restoring the parasite sensitivity to an important
CC   antimalarial drug. The method is useful for treating malaria. The
CC   method facilitates the continued use of mefloquine treatment in
CC   afflicted geographical areas, where otherwise, mefloquine use is
CC   increasingly restricted, due to decreased efficacy. Use of the
CC   antisense oligonucleotide allows a direct demonstration of the
CC   function of pfmdr1 gene in mefloquine resistance. The present
CC   sequence represents an antisense oligonucleotide directed
CC   towards the P. falciparum dihydrofolate reductase-thymidylate
CC   synthase (DHFR) gene in the examples of the present invention.
XX
SQ   Sequence 18 BP; 7 A; 2 C; 2 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1259 AAATAATTTTTTAGTA 1274
              ||||||||| || |||
Db          2 AAATAATTTCTTCGTA 17


RESULT 618
ABS54315/c
ID   ABS54315 standard; DNA; 18 BP.
XX
AC   ABS54315;
XX
DT   05-DEC-2002  (first entry)
XX
DE   P. falciparum DHFR gene antisense oligonucleotide 282.
XX
KW   Anti-drug resistant infectious agent; resensitising drug resistance;
KW   anti-infectious drug; drug resistant phenotype; Plasmodium; parasite;
KW   anti-malarial drug resistance; mefloquine; quinine; chloroquine;
KW   pfmdr1 gene; protozoacide; dihydrofolate reductase-thymidylate synthase;
KW   DHFR; ss.
XX
OS   Plasmodium falciparum.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1..18
FT                   /*tag=  a
FT                   /mod_base= OTHER
FT                   /note= "OTHER= phosphorothioate internucleotide
FT                         linkages"
XX
PN   US6440660-B1.
XX
PD   27-AUG-2002.
```

CX
PF 12-NOV-1996; 96US-0745485.
CX
PR 18-APR-1996; 96US-0634588.
PR 17-NOV-1995; 95US-0560474.
CX
PA (HYBR-) HYBRIDON INC.
PA (WORC-) WORCHESTER FOUND BIOMEDICAL RES.
CX
PI Barker RH, Rapaport E, Zamecnik PC;
CX
DR WPI; 2002-711526/77.
CX
PT Resensitising drug-resistant infectious organism to anti-infectious
PT organism drug, comprises use of synthetic oligonucleotide comprising a
PT sequence complementary to nucleic acid required for drug-resistant
PT phenotype -
CX
PS Examples; Column 21; 26pp; English.
CX
CC The present invention relates to methods of resensitising an
CC anti-drug resistant infectious agent to a drug. The method
CC comprises culturing the infectious organism with antisense
CC oligonucleotides with a sequence complementary to the nucleic acid
CC required for drug resistance. The method is useful for resensitising
CC drug resistant infectious organisms to anti-infectious drugs,
CC thereby reversing the drug resistant phenotype of the organism. The
CC method is useful for resensitising an anti-malarial drug resistant
CC Plasmodium parasite to an anti-malarial drug, which involves culturing
CC the parasite in the presence of an antisense oligonucleotide, to
CC enable the oligonucleotide to hybridise to the nucleic acid and
CC contacting and culturing the parasite with an anti-malarial drug such
CC as mefloquine, quinine, chloroquine or its derivatives, in the presence
CC of the oligonucleotide. Preferably, the parasite is contacted and
CC cultured with mefloquine or quinine. The antisense oligonucleotide is
CC useful for down-regulating the expression of the pfmdr1 gene. By
CC down-regulating the expression of Pfmdr1 gene, the antisense
CC oligonucleotide reverses the mefloquine-resistant phenotype of the
CC parasites, thus restoring the parasite sensitivity to an important
CC antimalarial drug. The method is useful for treating malaria. The
CC method facilitates the continued use of mefloquine treatment in
CC afflicted geographical areas, where otherwise, mefloquine use is
CC increasingly restricted, due to decreased efficacy. Use of the
CC antisense oligonucleotide allows a direct demonstration of the
CC function of pfmdr1 gene in mefloquine resistance. The present
CC sequence represents an antisense oligonucleotide directed
CC towards the P. falciparum dihydrofolate reductase-thymidylate
CC synthase (DHFR) gene in the examples of the present invention.
CC Note: This sequence appears as the second SEQ ID No 15 in column 21
CC of the specification and as SEQ ID No 16 in the sequence listing.
XX
SQ Sequence 18 BP; 7 A; 2 C; 2 G; 7 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1259 AAATAATTTTTTAGTA 1274
||||||||| || |||
Db 17 AAATAATTTCTTCGTA 2

RESULT 619
ABQ65395
ID ABQ65395 standard; DNA; 18 BP.
XX
AC ABQ65395;
XX
DT 20-AUG-2002 (first entry)
XX
DE Human gene methylation status determination oligo SEQ ID NO: 7.
XX
KW Toxicological diagnosis; DNA methylation; methylation status;
KW toxic response; human; ds.
XX
OS Homo sapiens.
XX
PN WO200240710-A2.
XX
PD 23-MAY-2002.
XX
PF 08-NOV-2001; 2001WO-EP12951.
XX
PR 14-NOV-2000; 2000DE-1056802.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2002-463571/49.
XX
PT Toxicological diagnosis, useful for diagnosis and prognosis of adverse
PT reactions, based on effect of test compounds on methylation status of
PT selected genes, involves determining changes in DNA methylation status
PT -
XX
PS Example 3; Page 107; 113pp; German.
XX
CC The present invention relates to a method of toxicological diagnosis,
CC involving taking a DNA-containing sample from an organism or cell culture
CC that has been treated with a test compound and determining any changes in
CC the DNA methylation status or pattern caused by said test compound. The
CC method is used for diagnosis and prognosis of adverse toxic responses in
CC individuals. The present sequence is a human sequence used to demonstrate
CC the method of the invention.
XX
SQ Sequence 18 BP; 2 A; 0 C; 4 G; 12 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1143 TTTATTTTATTTTAGA 1158
||| |||| |||||||
Db 2 TTTTTTTTGTTTTAGA 17

RESULT 620
ABK34044
ID ABK34044 standard; DNA; 18 BP.
XX
AC ABK34044;
XX
DT 18-JUN-2002 (first entry)
XX
DE Human NF1 probe #2.
XX
KW Human; ss; astrocytoma; cytostatic; staging; cysteine methylation; CpG;
KW bisulphite; brain tissue; MALDI; ESI; electron spray mass spectrometry;
KW matrix assisted laser desorption/ionization mass spectrometry; probe.
XX
OS Homo sapiens.
XX
PN WO200202808-A2.
XX
PD 10-JAN-2002.
XX
PF 02-JUL-2001; 2001WO-EP07538.
XX
PR 30-JUN-2000; 2000DE-1032529.
PR 01-SEP-2000; 2000DE-1043826.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX

```
R   WPI; 2002-171649/22.
X
T   Novel chemically modified genomic DNA sequences, useful in the
T   characterisation, classification, differentiation, grading, staging,
T   treatment and/or diagnosis of astrocytomas or predisposition to
T   astrocytomas  -
X
S   Example 2; Page 18; 37pp; English.
X
C   The invention relates to a nucleic acid comprising a sequence (I) of at
C   least 18 bases in length of a segment of chemically pre-treated genomic
C   DNA which has any one of the sequences of (ABK33919-ABK34032) or its
C   complement. Also included are an oligonucleotide or peptide nucleic
C   acid (or set thereof) of at least 9 nucleotides which hybridises to (I),
C   primers for (I), probes for detecting cytosine methylation or single-
C   nucleotide polymorphisms (SNP) in (I), an array of oligomers
C   or peptide nucleic acids for analysing diseases associated with the
C   methylation states of the CpG dinucleotides of (I). The array is useful
C   for determining genetic and/or epigenetic parameters, classification,
C   differentiation, grading, staging, treatment and/or diagnosis of
C   astrocytomas, or the predisposition to astrocytomas by analysing cytosine
C   methylations, involves obtaining a biological sample containing genomic
C   DNA, extracting the genomic DNA, converting cytosine bases which are
C   unmethylated at the 5-position, in the genomic DNA sample, to uracil or
C   another base which is dissimilar to cytosine in terms of hybridisation
C   behaviour, by chemical treatment and amplifying chemically pre-treated
C   genomic DNA fragments using the array and a polymerase, where the
C   amplificates carry a detectable label. The method further involves
C   identifying methylation status of one or more cytosine positions, and
C   analysing methylation status of the cytosine positions by reference to
C   one or more data sets. The genomic DNA is chemically treated by using a
C   bisulphite, hydrogen sulphite or disulphite. The amplification
C   step amplifies DNA which is of particular interest in astrocytoma or
C   brain tissue, based on the specific genomic methylation status of brain
C   tissues, as opposed to background DNA. The amplificates carry a
C   fluorescent label or radionuclide. Optionally, the labels of the
C   amplificates are detachable molecule fragments having a typical mass
C   which are detected in a mass spectrometer. The fragments of chemically
C   pre-treated genomic DNA to be amplified, have a single positive or
C   negative charge for a better detectability in the mass spectrometer.
C   Preferably, the amplificates or fragments of the amplificates are
C   detected by matrix assisted laser desorption/ionization mass spectrometry
C   (MALDI) or using electron spray mass spectrometry (ESI). The
C   present sequence is a probe used to detect a region containing
C   a methylated cytosine from one of the chemically pre-treated reference
C   DNA samples of the invention.
C   Note: The sequence data for this patent did not form part
C   of the printed specification, but was obtained in electronic
C   format directly from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
C
)   Sequence 18 BP; 11 A; 4 C; 0 G; 3 T; 0 other;

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
 Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

/       1400 ATTAAAACAGCCAAAA 1415
             |||||||||  ||  |||
>          2 ATTAAAACACCCTAAA 17


:SULT 621
3K40096/c
)   ABK40096 standard; DNA; 18 BP.
(
:   ABK40096;
(
:   21-MAY-2002  (first entry)
(
3   Human super oxide dismutase 1 oligonucleotide probe #2.
(
)   Human; ss; bisulphite treatment; CpG; DNA methylation; cancer; tumour;
```

```
KW   cytostatic; ALDH6; CYP11A; CYP11B1; CYP3A3; DPYD; EPHX2; OCLN; TXNRD1;
KW   UGT8; MRP; pharmacogenomics; SNP; single nucleotide polymorphism;
KW   probe; superoxide dismutase 1.
XX
OS   Homo sapiens.
XX
PN   WO200202806-A2.
XX
PD   10-JAN-2002.
XX
PF   29-JUN-2001; 2001WO-EP07470.
XX
PR   30-JUN-2000; 2000DE-1032529.
PR   01-SEP-2000; 2000DE-1043826.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2002-154757/20.
XX
PT   New nucleic acid, oligonucleotides and peptide nucleic acid-oligomers,
PT   useful for detecting cytosine methylation state of genes associated
PT   with pharmacogenomics and for therapy of diseases e.g. cancer  -
XX
PS   Example 1; Page 16; 24pp; English.
XX
CC   The invention relates to a nucleic acid comprising a sequence at
CC   least 18 bases in length of a segment of the chemically pretreated DNA
CC   of genes associated with pharmacogenomics according to one of the
CC   sequences of the genes ALDH6 (NM_000693), CYP11A (NM_000781), CYP11B1
CC   (NM_000497), CYP3A3 (NM_000776 and NM_017460), DPYD (NM_000110), EPHX2
CC   (NM_001979), OCLN (NM_002538), TXNRD1 (NM_003330), UGT8 (NM_003360),
CC   MRP (NM_004996, NM_019900, NM_019901, NM_019902, NM_019862, NM_019898,
CC   NM_019899) and their complementary sequences, or a sequence (SI) chosen
CC   from 87 sequences and their complements. The chemical pretreatment
CC   is bisulphite treatment to convert cytosines (but not methyl-cytosines)
CC   into uracils. Also included are an oligomer (II) in particular an
CC   oligonucleotide or a peptide nucleic acid (PNA)-oligomer, comprising in
CC   each case at least one base sequence having a length of 9 nucleotides
CC   which hybridises to or is identical to a chemically pretreated DNA of
CC   genes associated with pharmacogenomics and their complements, arranged in
CC   an array for analysing diseases associated with the methylation state
CC   (CpG) and/or detecting SNPs (single nucleotide polymorphisms)
CC   of the 87 sequences. The oligomers may also be used as PCR primers.
CC   The set of 87 nucleic acids and their complements is useful for diagnosis
CC   and therapy of solid tumours and cancer. The present sequence
CC   is a capture probe which captures a 451bp fragment of the human
CC   superoxide dismutase gene which has been treated with bisulphite to
CC   convert cytosines to uracils. The fragment is only captured if a
CC   methylated cytosine is present at position 111.
XX
SQ   Sequence 18 BP; 2 A; 0 C; 5 G; 11 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1400 ATTAAAACAGCCAAAA 1415
              |||||||||  ||  |||
Db         17 ATTAAAACACCCCAAA 2


RESULT 622
ABA83553
ID   ABA83553 standard; DNA; 18 BP.
XX
AC   ABA83553;
XX
DT   08-FEB-2002  (first entry)
XX
DE   Mouse MP-1 antisense oligonucleotide SEQ ID NO 96.
XX
```

```
KW   Human; mouse; rat; antisense gene therapy; MP-1; MAP kinase Partner 1;
KW   antiinflammatory; cytostatic; antimicrobial; infection; tumour;
KW   phosphorothioate; ss.
XX
OS   Mus musculus.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1..18
FT                   /*tag=  a
FT                   /mod_base= OTHER
FT                   /note= "phosphorothioate backbone linkage, all cytidine
FT                         residues are 5-methylcytidines"
FT   modified_base   1..4
FT                   /*tag=  b
FT                   /mod_base= OTHER
FT                   /note= "2'-MOE wings"
FT   modified_base   15..18
FT                   /*tag=  c
FT                   /mod_base= OTHER
FT                   /note= "2'-MOE wings"
XX
PN   US6306606-B1.
XX
PD   23-OCT-2001.
XX
PF   22-NOV-2000; 2000US-0721822.
XX
PR   22-NOV-2000; 2000US-0721822.
XX
PA   (ISIS-) ISIS PHARM INC.
PA   (UYVI-) UNIV VIRGINIA.
XX
PI   Weber MJ,  Wyatt J,  Cowsert LM;
XX
DR   WPI; 2002-040199/05.
XX
PT   New antisense oligonucleotides for modulating the expression of MP-1
PT   (MAP kinase partner 1), for preventing, delaying or treating infection,
PT   inflammation or tumour formation, especially in humans  -
XX
PS   Claim 1; Column 43-44; 47pp; English.
XX
CC   The invention relates to an antisense compound (ABA83459-ABA83576) which
CC   is up to 30 nucleobases in length and that inhibits the expression of
CC   MP-1 (MAP kinase Partner 1) in cells or tissues comprising contacting the
CC   cells or tissues in vitro with the antisense compound so that expression
CC   of MP-1 is inhibited. The antisense compounds have potential
CC   antiinflammatory, cytostatic and antimicrobial activity. The antisense
CC   compounds are useful for diagnostics, therapeutics, prophylaxis or as
CC   research reagents or kits. The antisense oligonucleotides are useful in
CC   gene therapy for treating an animal, particularly a human, suspected of
CC   having or being prone to a disease or condition associated with the
CC   expression of MP-1. In particular, the antisense oligonucleotides are
CC   useful for preventing, delaying or treating infection, inflammation or
CC   tumour formation. The present sequence is that of a mouse MP-1 antisense
CC   oligonucleotide, comprising a chimeric oligonucleotide gapmer 18
CC   nucleotides in length, composed of a central gap region of ten
CC   2'-deoxynucleotides flanked by four nucleotide 2'-MOE wings.
XX
SQ   Sequence 18 BP; 1 A; 5 C; 5 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1353 CTGTGTTGGTAGTGCT 1368
              ||||||||| | ||||
Db          3 CTGTGTTGGCACTGCT 18


RESULT 623
ABZ70969
ID   ABZ70969 standard; RNA; 18 BP.
XX
AC   ABZ70969;
XX
DT   24-APR-2003  (first entry)
XX
DE   Human bcl-2 related mRNA sequence #2.
XX
KW   Nervous tumour; Hu protein; cytostatic; gene therapy; neuroblastoma;
KW   human; bcl-2; ss.
XX
OS   Homo sapiens.
XX
PN   WO200294306-A1.
XX
PD   28-NOV-2002.
XX
PF   03-OCT-2001; 2001WO-JP08701.
XX
PR   24-MAY-2001; 2001JP-0155237.
XX
PA   (NISC-) JAPAN SCI & TECHNOLOGY CORP.
XX
PI   Okano H,  Akamatsu W;
XX
DR   WPI; 2003-093385/08.
XX
PT   Remedies for nervous tumor containing Hu protein, its variant or their
PT   encoded gene as active ingredient, applicable in novel method for
PT   treating neuroblastoma  -
XX
PS   Example 4; Fig 7; 20pp; Japanese.
XX
CC   The present invention describes a method for the treatment of nervous
CC   tumours which comprises as active ingredients: (1) Hu protein; or
CC   (2) a polypeptide based on the protein but with some amino acids
CC   substituted, deleted, added or inserted; or (3) the gene encoding
CC   Hu protein. Hu protein has cytostatic activity and can be used in
CC   gene therapy. The method is used for treating nervous tumour
CC   (preferably neuroblastoma). The present sequence represents a human
CC   bcl-2 related RNA sequence, which is used in an example from the
CC   present invention.
XX
SQ   Sequence 18 BP; 6 A; 1 C; 2 G; 2 T; 7 U; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   50.0%;  Pred. No. 4.5e+02;
  Matches    8;  Conservative    6;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1050 ATGTATTTATTTAAGC 1065
              | |||::: :::|||
Db          2 AAGTAUUUUUUUAAGC 17


RESULT 624
ABZ10410
ID   ABZ10410 standard; DNA; 18 BP.
XX
AC   ABZ10410;
XX
DT   16-JAN-2003  (first entry)
XX
DE   Haematopoietic cell proliferation disorder related oligonucleotide #550.
XX
KW   Human; haematopoietic cell proliferation disorder; cytostatic;
KW   gene therapy; lymphocytic leukaemia; acute myelogenous leukaemia;
KW   cytosine methylation state; probe; primer; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200277272-A2.
XX
```

D 03-OCT-2002.
X
F 26-MAR-2002; 2002WO-EP03401.
K
R 26-MAR-2001; 2001US-278333P.
K
A (EPIG-) EPIGENOMICS AG.
K
I Berlin K, Braun A, Distler J, Guetig D, Howe A, Mueller J;
I Olek A, Piepenbrock C, Adorjan P, Grabs G, Lesche R, Leu E;
I Lewin A, Lipscher E, Maier S, Model F, Mueller V, Otto T;
I Pelet C, Schwope I, Ziebarth H;
K
R WPI; 2003-018942/01.
K
T Detecting and differentiating between hematopoietic cell proliferative
T disorders, comprises contacting a target nucleic acid with a reagent
T that distinguishes between methylated and non-methylated CpG
T dinucleotides -
K
S Claim 15; Page 41; 117pp; English.
K
The present invention describes a method for detecting and
differentiating between haematopoietic cell proliferative disorders
associated with at least 1 gene and/or their regulatory regions in a
subject. The method comprises contacting a target nucleic acid in a
biological sample obtained from the subject with at least 1 reagent,
which distinguishes between methylated and non-methylated CpG
dinucleotides within the target nucleic acid. ABZ09861 to ABZ11118
represent specifically claimed nucleotide sequences from the present
invention. Oligonucleotides from the present invention can be used: for
differentiating between healthy haematopoietic cells and proliferative
disorder haematopoietic cells; for differentiating between acute
lymphocytic leukaemia and acute myelogenous leukaemia; as probes for
determining the cytosine methylation state and/or single nucleotide
polymorphisms (SNPs) of haematopoietic cell proliferation disorder
related sequences and their complements; and as primers for the
amplification of haematopoietic cell proliferation disorder related
DNA sequences. The nucleotide sequences from the present invention can
also be used for detecting a predisposition to, differentiation between
subclasses, diagnosis, prognosis, treatment and/or monitoring of
haematopoietic cell proliferative disorders. The present method enables
a highly specific classification of haematopoietic cell proliferative
disorders allowing for improved and informed treatment of patients.
K
) Sequence 18 BP; 8 A; 0 C; 2 G; 8 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

/ 1124 ATAAAGATGTTATAGT 1139
|||| ||||||||||
) 2 ATAATAATGTTATAGT 17

SULT 625
3Z10519/c
) ABZ10519 standard; DNA; 18 BP.
(
: ABZ10519;
(
P 16-JAN-2003 (first entry)
(
3 Haematopoietic cell proliferation disorder related oligonucleotide #659.
(
W Human; haematopoietic cell proliferation disorder; cytostatic;
W gene therapy; lymphocytic leukaemia; acute myelogenous leukaemia;
W cytosine methylation state; probe; primer; ss.
(
3 Homo sapiens.
3 Synthetic.
(

PN WO200277272-A2.
XX
PD 03-OCT-2002.
XX
PF 26-MAR-2002; 2002WO-EP03401.
XX
PR 26-MAR-2001; 2001US-278333P.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Berlin K, Braun A, Distler J, Guetig D, Howe A, Mueller J;
PI Olek A, Piepenbrock C, Adorjan P, Grabs G, Lesche R, Leu E;
PI Lewin A, Lipscher E, Maier S, Model F, Mueller V, Otto T;
PI Pelet C, Schwope I, Ziebarth H;
XX
DR WPI; 2003-018942/01.
XX
PT Detecting and differentiating between hematopoietic cell proliferative
PT disorders, comprises contacting a target nucleic acid with a reagent
PT that distinguishes between methylated and non-methylated CpG
PT dinucleotides -
XX
PS Claim 15; Page 47; 117pp; English.
XX
CC The present invention describes a method for detecting and
CC differentiating between haematopoietic cell proliferative disorders
CC associated with at least 1 gene and/or their regulatory regions in a
CC subject. The method comprises contacting a target nucleic acid in a
CC biological sample obtained from the subject with at least 1 reagent,
CC which distinguishes between methylated and non-methylated CpG
CC dinucleotides within the target nucleic acid. ABZ09861 to ABZ11118
CC represent specifically claimed nucleotide sequences from the present
CC invention. Oligonucleotides from the present invention can be used: for
CC differentiating between healthy haematopoietic cells and proliferative
CC disorder haematopoietic cells; for differentiating between acute
CC lymphocytic leukaemia and acute myelogenous leukaemia; as probes for
CC determining the cytosine methylation state and/or single nucleotide
CC polymorphisms (SNPs) of haematopoietic cell proliferation disorder
CC related sequences and their complements; and as primers for the
CC amplification of haematopoietic cell proliferation disorder related
CC DNA sequences. The nucleotide sequences from the present invention can
CC also be used for detecting a predisposition to, differentiation between
CC subclasses, diagnosis, prognosis, treatment and/or monitoring of
CC haematopoietic cell proliferative disorders. The present method enables
CC a highly specific classification of haematopoietic cell proliferative
CC disorders allowing for improved and informed treatment of patients.
XX
SQ Sequence 18 BP; 4 A; 1 C; 4 G; 9 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 4.5e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 620 AAAACAACAAATAATT 635
||||| || |||||||
Db 17 AAAACTACGAATAATT 2

RESULT 626
ABZ10596/c
ID ABZ10596 standard; DNA; 18 BP.
XX
AC ABZ10596;
XX
DT 16-JAN-2003 (first entry)
XX
DE Haematopoietic cell proliferation disorder related oligonucleotide #736.
XX
KW Human; haematopoietic cell proliferation disorder; cytostatic;
KW gene therapy; lymphocytic leukaemia; acute myelogenous leukaemia;
KW cytosine methylation state; probe; primer; ss.
XX
OS Homo sapiens.

```
S   Synthetic.
X
N   WO200277272-A2.
X
D   03-OCT-2002.
X
F   26-MAR-2002; 2002WO-EP03401.
X
R   26-MAR-2001; 2001US-278333P.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Berlin K, Braun A, Distler J, Guetig D, Howe A, Mueller J;
I   Olek A, Piepenbrock C, Adorjan P, Grabs G, Lesche R, Leu E;
I   Lewin A, Lipscher E, Maier S, Model F, Mueller V, Otto T;
I   Pelet C, Schwope I, Ziebarth H;
X
R   WPI; 2003-018942/01.
X
T   Detecting and differentiating between hematopoietic cell proliferative
T   disorders, comprises contacting a target nucleic acid with a reagent
T   that distinguishes between methylated and non-methylated CpG
T   dinucleotides -
X
S   Claim 15; Page 52; 117pp; English.
X
C   The present invention describes a method for detecting and
C   differentiating between haematopoietic cell proliferative disorders
C   associated with at least 1 gene and/or their regulatory regions in a
C   subject. The method comprises contacting a target nucleic acid in a
C   biological sample obtained from the subject with at least 1 reagent,
C   which distinguishes between methylated and non-methylated CpG
C   dinucleotides within the target nucleic acid. ABZ09861 to ABZ11118
C   represent specifically claimed nucleotide sequences from the present
C   invention. Oligonucleotides from the present invention can be used: for
C   differentiating between healthy haematopoietic cells and proliferative
C   disorder haematopoietic cells; for differentiating between acute
C   lymphocytic leukaemia and acute myelogenous leukaemia; as probes for
C   determining the cytosine methylation state and/or single nucleotide
C   polymorphisms (SNPs) of haematopoietic cell proliferation disorder
C   related sequences and their complements; and as primers for the
C   amplification of haematopoietic cell proliferation disorder related
C   DNA sequences. The nucleotide sequences from the present invention can
C   also be used for detecting a predisposition to, differentiation between
C   subclasses, diagnosis, prognosis, treatment and/or monitoring of
C   haematopoietic cell proliferative disorders. The present method enables
C   a highly specific classification of haematopoietic cell proliferative
C   disorders allowing for improved and informed treatment of patients.
CX
SQ  Sequence 18 BP; 3 A; 0 C; 4 G; 11 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        611 AATCTACAAAAAACAA 626
              ||| | ||||||||||
Db         16 AATTTCCAAAAAACAA 1


RESULT 627
ABZ10922
ID   ABZ10922 standard; DNA; 18 BP.
XX
AC   ABZ10922;
XX
DT   16-JAN-2003  (first entry)
XX
DE   Haematopoietic cell proliferation disorder related oligonucleotide #1062.
XX
KW   Human; haematopoietic cell proliferation disorder; cytostatic;
KW   gene therapy; lymphocytic leukaemia; acute myelogenous leukaemia;
KW   cytosine methylation state; probe; primer; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200277272-A2.
XX
PD   03-OCT-2002.
XX
PF   26-MAR-2002; 2002WO-EP03401.
XX
PR   26-MAR-2001; 2001US-278333P.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Berlin K, Braun A, Distler J, Guetig D, Howe A, Mueller J;
PI   Olek A, Piepenbrock C, Adorjan P, Grabs G, Lesche R, Leu E;
PI   Lewin A, Lipscher E, Maier S, Model F, Mueller V, Otto T;
PI   Pelet C, Schwope I, Ziebarth H;
XX
DR   WPI; 2003-018942/01.
XX
PT   Detecting and differentiating between hematopoietic cell proliferative
PT   disorders, comprises contacting a target nucleic acid with a reagent
PT   that distinguishes between methylated and non-methylated CpG
PT   dinucleotides -
XX
PS   Claim 15; Page 70; 117pp; English.
XX
CC   The present invention describes a method for detecting and
CC   differentiating between haematopoietic cell proliferative disorders
CC   associated with at least 1 gene and/or their regulatory regions in a
CC   subject. The method comprises contacting a target nucleic acid in a
CC   biological sample obtained from the subject with at least 1 reagent,
CC   which distinguishes between methylated and non-methylated CpG
CC   dinucleotides within the target nucleic acid. ABZ09861 to ABZ11118
CC   represent specifically claimed nucleotide sequences from the present
CC   invention. Oligonucleotides from the present invention can be used: for
CC   differentiating between healthy haematopoietic cells and proliferative
CC   disorder haematopoietic cells; for differentiating between acute
CC   lymphocytic leukaemia and acute myelogenous leukaemia; as probes for
CC   determining the cytosine methylation state and/or single nucleotide
CC   polymorphisms (SNPs) of haematopoietic cell proliferation disorder
CC   related sequences and their complements; and as primers for the
CC   amplification of haematopoietic cell proliferation disorder related
CC   DNA sequences. The nucleotide sequences from the present invention can
CC   also be used for detecting a predisposition to, differentiation between
CC   subclasses, diagnosis, prognosis, treatment and/or monitoring of
CC   haematopoietic cell proliferative disorders. The present method enables
CC   a highly specific classification of haematopoietic cell proliferative
CC   disorders allowing for improved and informed treatment of patients.
XX
SQ   Sequence 18 BP; 4 A; 1 C; 1 G; 12 T; 0 other;

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 4.5e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        833 TTTTTTTCTGTTAAAT 848
              ||||||| |||||| |
Db          1 TTTTTTTATGTTAATT 16


RESULT 628
AAA83135/c
ID   AAA83135 standard; DNA; 19 BP.
XX
AC   AAA83135;
XX
DT   04-DEC-2000  (first entry)
XX
DB   cdk7 ribozyme binding site #56.
XX
KW   Ribozyme; hairpin; hammerhead; gene therapy; vasotropic;
```

restenosis; ss.

Mammalia.

WO200032765-A2.

08-JUN-2000.

06-DEC-1999; 99WO-US28772.

04-DEC-1998; 98US-0110954.

(IMMU-) IMMUSOL INC.

Tritz R, Welch PJ, Barber JR, Robbins JM;

WPI; 2000-412314/35.

New hairpin and hammerhead ribozyme for inhibiting restenosis, cleaves RNA encoding a cyclin or cell-cycle dependent kinase other than CDK1, PCNA and Cyclin B1 -

Disclosure; Page 57; 109pp; English.

The present invention relates to a hairpin or hammerhead ribozyme, designed to cleave RNA encoding a cyclin or cell-cycle dependent kinase other than cell-cycle dependent kinases CDK1, PCNA and Cyclin B1. Representative examples of ribozyme recognition sites are given in AAA82415 to AAA86787. The ribozyme of the invention is useful for inhibiting restenosis by introduction of the ribozyme into cells. The ribozyme is resistant to endonuclease activity and hence is efficient in restenosis treatment.

Sequence 19 BP; 5 A; 1 C; 4 G; 9 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 19;
Best Local Similarity 87.5%; Pred. No. 4.7e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
        798 TTGCCATAAAGTCAAA 813
            || ||||||| |||||
         19 TTTCCATAAAATCAAA 4
```

RESULT 629
AAH58297/c
AAH58297 standard; DNA; 19 BP.

AAH58297;

10-SEP-2001 (first entry)

Cell-cycle dependent kinase cdk7 ribozyme binding site SEQ ID NO:721.

Human; ribozyme therapy; hairpin ribozyme; hammerhead ribozyme; recognition site; target; ribozyme binding site; eye disease; vulnerary; proliferative disease; skin disease; psoriasis; diabetic retinopathy; cytokine; inflammation; cell-cycle dependent kinase; cyclin; MMP; matrix metalloproteinase; growth factor; reductase; scarring; cytostatic; antipsoriatic; dermatological; antiseborrheic; antidiabetic; virucide; antisickling; ophthalmological; keratolytic; gene therapy; viral wart; atopic dermatitis; actinic keratosis; squamous cell carcinoma; basal cell carcinoma; seborrheic wart; vitreoretinopathy; scar; sickle cell retinopathy; ss.

Homo sapiens.
Synthetic.

WO200130362-A2.

03-MAY-2001.

26-OCT-2000; 2000WO-US29500.

26-OCT-1999; 99US-0161532.

(IMMU-) IMMUSOL INC.

Robbins JM, Tritz R;

WPI; 2001-300427/31.

Treating proliferative skin or eye diseases and scarring, using ribozymes that cleave RNA encoding cytokines involved in inflammation, matrix metalloproteinases, growth factors and cell-cycle dependent kinases -

Example 1; Page 124; 408pp; English.

The present invention describes a method for treating a proliferative skin or eye disease and scarring. The method involves administering a ribozyme (I) which cleaves RNA encoding a cytokine involved in inflammation, matrix metalloproteinase (MMP), cyclin, cell-cycle dependent kinase, growth factor or a reductase, or administering a nucleic acid molecule (II) comprising a promoter operably linked to a nucleic acid segment encoding (I). (I) can have antipsoriatic, dermatological, cytostatic, antiseborrheic, antidiabetic, antisickling, ophthalmological, vulnerary, keratolytic and virucide activities, and cleaves RNA encoding cytokine involved in inflammation. (I) can be used in gene therapy. (I) and (II) are useful for treating proliferative skin diseases such as psoriasis, atopic dermatitis, actinic keratosis, squamous or basal cell carcinoma and viral or seborrheic wart. They can also be used for treating proliferative eye diseases such as diabetic retinopathy, vitreoretinopathy, sickle cell retinopathy, retinopathy of prematurity and retinal detachment, and for treating and preventing scarring such as keloid, adhesion and hypertrophic or hypertrophic burn scar. AAH57577 to AAH62099 represent sequences used in the exemplification of the present invention.

SQ Sequence 19 BP; 5 A; 1 C; 4 G; 9 T; 0 other;

Query Match 1.0%; Score 12.8; DB 1; Length 19;
Best Local Similarity 87.5%; Pred. No. 4.7e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy      798 TTGCCATAAAGTCAAA 813
            || ||||||| |||||
Db       19 TTTCCATAAAATCAAA 4
```

RESULT 630
ABC05468
ID ABC05468 standard; DNA; 13 BP.

AC ABC05468;

DT 20-FEB-2002 (first entry)

DE Oligonucleotide SEQ ID NO 5459 for detecting SNP TSC0001825.

KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

OS Homo sapiens.

PN WO200177384-A2.

PD 18-OCT-2001.

PF 06-APR-2001; 2001WO-IB00713.

PR 07-APR-2000; 2000DE-1019173.

PA (EPIG-) EPIGENOMICS AG.

PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 5459; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 3 A; 0 C; 2 G; 7 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1535 TTTAAGATGTTTT 1547
||||||||||||:
Db 1 TTTAAGATGTTTY 13

RESULT 631
ABC05469/c
ID ABC05469 standard; DNA; 13 BP.
XX
AC ABC05469;
XX
DT 20-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 5460 for detecting SNP TSC0001825.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 5460; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 7 A; 2 C; 0 G; 3 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1535 TTTAAGATGTTTT 1547
||||||||||||:
Db 13 TTTAAGATGTTTY 1

RESULT 632
ABC12854
ID ABC12854 standard; DNA; 13 BP.
XX
AC ABC12854;
XX
DT 20-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 12861 for detecting SNP TSC0003005.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 12861; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 5 A; 0 C; 0 G; 7 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;

```
 Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
 Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

/       1140 AAATTTATTTTAT 1152
             ||||||||||||:
>              1 AAATTTATTTTAY 13


SULT 633
3C12855/c
)   ABC12855 standard; DNA; 13 BP.
(
:   ABC12855;
(
[   20-FEB-2002  (first entry)
(
:   Oligonucleotide SEQ ID NO 12862 for detecting SNP TSC0003005.
(
;   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
;   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
;   central nervous system; gastrointestinal; respiratory; immune; metabolic.
(
3   Homo sapiens.
(
1   WO200177384-A2.
(
)   18-OCT-2001.
:
7   06-APR-2001; 2001WO-IB00713.
:
:   07-APR-2000; 2000DE-1019173.
:
A   (EPIG-) EPIGENOMICS AG.
:
:   Olek A,  Piepenbrock C,  Berlin K;
:
1   WPI; 2001-657177/75.
(
:   Set of oligonucleotides, useful for diagnosis and cell typing, is
:   designed to detect single nucleotide polymorphisms and cytosine
:   methylation status  -
(
3   Claim 1; SEQ ID 12862; 29pp + Sequence Listing; German.
(
:   This invention describes novel oligonucleotide primers or peptide nucleic
:   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
:   and cytosine methylation status in chemically pretreated genomic DNA. The
:   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
:   range of diseases including immune system, gastrointestinal, respiratory,
:   central nervous system, cardiovascular and metabolic disorders. The
:   oligomers are also used for detecting cell type differentiation.
:   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
:   ABI00010-ABI82073 represent the oligomers described in the invention.
:   NOTE: The sequence data for this patent did not form part of the printed
:   specification, but was obtained in electronic format from WIPO at
:   ftp.wipo.int/pub/published_pct_sequences.
(
)   Sequence 13 BP; 7 A; 0 C; 0 G; 5 T; 1 other;

 Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
 Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
 Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

/       1140 AAATTTATTTTAT 1152
             ||||||||||||:
>             13 AAATTTATTTTAY 1


3SULT 634
3C13828/c
)   ABC13828 standard; DNA; 13 BP.
(
:   ABC13828;
```

```
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 13835 for detecting SNP TSC0003179.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 13835; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 0 A; 0 C; 2 G; 10 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         618 AAAAAACAACAAA 630
               :|||||||||||||
Db          13 RAAAAACAACAAA 1


RESULT 635
ABC13829
ID   ABC13829 standard; DNA; 13 BP.
XX
AC   ABC13829;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 13836 for detecting SNP TSC0003179.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
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PD   18-OCT-2001.
CX
PF   06-APR-2001; 2001WO-IB00713.
CX
PR   07-APR-2000; 2000DE-1019173.
CX
PA   (EPIG-) EPIGENOMICS AG.
CX
PI   Olek A,  Piepenbrock C,  Berlin K;
CX
PR   WPI; 2001-657177/75.
CX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
CX
PS   Claim 1; SEQ ID 13836; 29pp + Sequence Listing; German.
CX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
CX
SQ   Sequence 13 BP; 10 A; 2 C; 0 G; 0 U; 1 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        618 AAAAAACAACAAA 630
              :|||||||||||
Db          1 RAAAAACAACAAA 13


RESULT 636
ABC23680
ID   ABC23680 standard; DNA; 13 BP.
XX
AC   ABC23680;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 23697 for detecting SNP TSC0005244.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 23697; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 6 A; 0 C; 1 G; 5 T; 1 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        1618 AAATATAATTTGT 1630
               |||||||||||:
Db           1 AAATATAATTTGY 13


RESULT 637
ABC23681/c
ID   ABC23681 standard; DNA; 13 BP.
XX
AC   ABC23681;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 23698 for detecting SNP TSC0005244.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 23698; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
```

ABI00010-ABI82073 represent the oligomers described in the invention.
NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 5 A; 1 C; 0 G; 6 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

1618 AAATATAATTTGT 1630
||||||||||||:
13 AAATATAATTTGY 1

SULT 638
C26934
ABC26934 standard; DNA; 13 BP.

ABC26934;

20-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 26951 for detecting SNP TSC0007310.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 26951; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 2 A; 0 C; 0 G; 10 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

1143 TTTATTTTATTTT 1155
||||||||||||:
Db 1 TTTATTTTATTTY 13

RESULT 639
ABC26935/c
ID ABC26935 standard; DNA; 13 BP.
XX
AC ABC26935;
XX
DT 20-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 26952 for detecting SNP TSC0007310.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 26952; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 10 A; 0 C; 0 G; 2 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1143 TTTATTTTATTTT 1155
||||||||||||:
Db 13 TTTATTTTATTTY 1

RESULT 640
ABC45016/c
ID ABC45016 standard; DNA; 13 BP.
XX
AC ABC45016;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 45033 for detecting SNP TSC0013165.
XX

KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 45033; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 0 A; 0 C; 3 G; 9 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1208 AACAAACAAACAA 1220
:|||||||||||||
Db 13 RACAAACAAACAA 1

RESULT 641
ABC45017
ID ABC45017 standard; DNA; 13 BP.
XX
AC ABC45017;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 45034 for detecting SNP TSC0013165.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 45034; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 9 A; 3 C; 0 G; 0 U; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1208 AACAAACAAACAA 1220
:|||||||||||||
Db 1 RACAAACAAACAA 13

RESULT 642
ABC52710
ID ABC52710 standard; DNA; 13 BP.
XX
AC ABC52710;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 52727 for detecting SNP TSC0014602.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 52727; 29pp + Sequence Listing; German.
XX

CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 4 A; 0 C; 1 G; 7 T; 1 other;

```
Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        596 AGTATTATTTATT 608
              |||||||||||:
Db          1 AGTATTATTTATY 13
```

RESULT 643
ABC52711/c
ID ABC52711 standard; DNA; 13 BP.
XX
AC ABC52711;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 52728 for detecting SNP TSC0014602.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 52728; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 7 A; 1 C; 0 G; 4 T; 1 other;

```
Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        596 AGTATTATTTATT 608
              |||||||||||:
Db          13 AGTATTATTTATY 1
```

RESULT 644
ABC59940
ID ABC59940 standard; DNA; 13 BP.
XX
AC ABC59940;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 59957 for detecting SNP TSC0016027.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 59957; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 3 A; 0 C; 2 G; 7 T; 1 other;

```
Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1169 TGTTTTATTAGAT 1181
              |||||||||||:
Db          1 TGTTTTATTAGAY 13
```

RESULT 645
ABC59941/c

```
D   ABC59941 standard; DNA; 13 BP.
X
C   ABC59941;
X
T   21-FEB-2002  (first entry)
X
E   Oligonucleotide SEQ ID NO 59958 for detecting SNP TSC0016027.
X
W   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
W   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
W   central nervous system; gastrointestinal; respiratory; immune; metabolic.
X
S   Homo sapiens.
X
N   WO200177384-A2.
X
D   18-OCT-2001.
X
F   06-APR-2001; 2001WO-IB00713.
X
R   07-APR-2000; 2000DE-1019173.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Olek A,  Piepenbrock C,  Berlin K;
X
R   WPI; 2001-657177/75.
X
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 59958; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
Q   Sequence 13 BP; 7 A; 2 C; 0 G; 3 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

y       1169 TGTTTTATTAGAT 1181
             ||||||||||||:
b         13 TGTTTTATTAGAY 1


ESULT 646
BC72766/c
D   ABC72766 standard; DNA; 13 BP.
X
C   ABC72766;
X
T   21-FEB-2002  (first entry)
X
E   Oligonucleotide SEQ ID NO 72783 for detecting SNP TSC0018798.
X
W   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
W   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
W   central nervous system; gastrointestinal; respiratory; immune; metabolic.
X
S   Homo sapiens.
X
N   WO200177384-A2.
X
D   18-OCT-2001.
X
F   06-APR-2001; 2001WO-IB00713.
X
R   07-APR-2000; 2000DE-1019173.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Olek A,  Piepenbrock C,  Berlin K;
X
R   WPI; 2001-657177/75.
X
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 72783; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
Q   Sequence 13 BP; 4 A; 0 C; 1 G; 7 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1609 AAACATTTAAAAT 1621
              :||||||||||||
Db         13 RAACATTTAAAAT 1


RESULT 647
ABC72767
ID   ABC72767 standard; DNA; 13 BP.
XX
AC   ABC72767;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 72784 for detecting SNP TSC0018798.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
```

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 72784; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 7 A; 1 C; 0 G; 4 T; 1 other;

```
Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

       1609 AAACATTTAAAAT 1621
            :|||||||||||
          1 RAACATTTAAAAT 13
```

SULT 648
C75212/c

ABC75212 standard; DNA; 13 BP.

ABC75212;

21-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 75229 for detecting SNP TSC0019311.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 75229; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 3 A; 0 C; 2 G; 7 T; 1 other;

```
  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         999 ATCATAACATAAA 1011
               :|||||||||||
Db          13 RTCATAACATAAA 1

RESULT 649
ABC75213
ID   ABC75213 standard; DNA; 13 BP.
XX
AC   ABC75213;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 75230 for detecting SNP TSC0019311.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status -
XX
PS   Claim 1; SEQ ID 75230; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 7 A; 2 C; 0 G; 3 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
y        999 ATCATAACATAAA 1011
             :|||||||||||||
b          1 RTCATAACATAAA 13


ESULT 650
BC80810/c
D   ABC80810 standard; DNA; 13 BP.
K
C   ABC80810;
K
T   21-FEB-2002  (first entry)
X
E   Oligonucleotide SEQ ID NO 80827 for detecting SNP TSC0020471.
X
W   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
W   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
W   central nervous system; gastrointestinal; respiratory; immune; metabolic.
X
S   Homo sapiens.
X
N   WO200177384-A2.
X
D   18-OCT-2001.
X
F   06-APR-2001; 2001WO-IB00713.
X
R   07-APR-2000; 2000DE-1019173.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Olek A,  Piepenbrock C,  Berlin K;
X
R   WPI; 2001-657177/75.
X
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 80827; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
Q   Sequence 13 BP; 2 A; 0 C; 3 G; 7 T; 1 other;

 Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
 Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
 Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

y        612 ATCTACAAAAAAC 624
             :|||||||||||||
b         13 RTCTACAAAAAAC 1


ESULT 651
BC80811
D   ABC80811 standard; DNA; 13 BP.
X
C   ABC80811;
X
T   21-FEB-2002  (first entry)
X
D   Oligonucleotide SEQ ID NO 80828 for detecting SNP TSC0020471.
X
W   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
W   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
W   central nervous system; gastrointestinal; respiratory; immune; metabolic.
X
S   Homo sapiens.
X
N   WO200177384-A2.
X
D   18-OCT-2001.
X
F   06-APR-2001; 2001WO-IB00713.
X
R   07-APR-2000; 2000DE-1019173.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Olek A,  Piepenbrock C,  Berlin K;
X
R   WPI; 2001-657177/75.
X
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 80828; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
Q   Sequence 13 BP; 7 A; 3 C; 0 G; 2 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        612 ATCTACAAAAAAC 624
              :|||||||||||||
Db          1 RTCTACAAAAAAC 13


RESULT 652
ABC93680/c
ID   ABC93680 standard; DNA; 13 BP.
XX
AC   ABC93680;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 93697 for detecting SNP TSC0023406.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
```

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 93697; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 1 A; 0 C; 2 G; 9 T; 1 other;

```
Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

        619 AAAAACAACAAAT 631
            :||||||||||||
         13 RAAAACAACAAAT 1
```

SULT 653
C93681
ABC93681 standard; DNA; 13 BP.

ABC93681;

21-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 93698 for detecting SNP TSC0023406.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

XX
PS Claim 1; SEQ ID 93698; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 9 A; 2 C; 0 G; 1 T; 1 other;

```
  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        619 AAAAACAACAAAT 631
              :||||||||||||
Db          1 RAAAACAACAAAT 13
```

RESULT 654
ABC95530/c
ID ABC95530 standard; DNA; 13 BP.
XX
AC ABC95530;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 95547 for detecting SNP TSC0023777.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metaboli .
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 95547; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed

```
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 1 A; 0 C; 2 G; 9 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1249 GATAAACAACAAA 1261
              :||||||||||||
Db         13 RATAAACAACAAA 1


RESULT 655
ABC95531
ID   ABC95531 standard; DNA; 13 BP.
XX
AC   ABC95531;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 95548 for detecting SNP TSC0023777.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 95548; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 9 A; 2 C; 0 G; 1 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1249 GATAAACAACAAA 1261
              :||||||||||||
Db         1 RATAAACAACAAA 13


RESULT 656
ABF24642
ID   ABF24642 standard; DNA; 13 BP.
XX
AC   ABF24642;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 124639 for detecting SNP TSC0031166.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 124639; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 4 A; 0 C; 1 G; 7 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1043 ATTATTTATGTAT 1055
              ||||||||||||:
Db          1 ATTATTTATGTAY 13


RESULT 657
ABF24643/c
ID   ABF24643 standard; DNA; 13 BP.
XX
AC   ABF24643;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 124640 for detecting SNP TSC0031166.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
```

```
W   central nervous system; gastrointestinal; respiratory; immune; metabolic.
K
S   Homo sapiens.
K
W   WO200177384-A2.
(
)   18-OCT-2001.
:
?   06-APR-2001; 2001WO-IB00713.
[
2   07-APR-2000; 2000DE-1019173.
(
\   (EPIG-) EPIGENOMICS AG.
(
I   Olek A,  Piepenbrock C,  Berlin K;
(
2   WPI; 2001-657177/75.
(
P   Set of oligonucleotides, useful for diagnosis and cell typing, is
P   designed to detect single nucleotide polymorphisms and cytosine
P   methylation status  -
(
3   Claim 1; SEQ ID 124640; 29pp + Sequence Listing; German.
(
:   This invention describes novel oligonucleotide primers or peptide nucleic
:   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
:   and cytosine methylation status in chemically pretreated genomic DNA. The
:   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
:   range of diseases including immune system, gastrointestinal, respiratory,
:   central nervous system, cardiovascular and metabolic disorders. The
:   oligomers are also used for detecting cell type differentiation.
:   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
:   ABI00010-ABI82073 represent the oligomers described in the invention.
:   NOTE: The sequence data for this patent did not form part of the printed
:   specification, but was obtained in electronic format from WIPO at
:   ftp.wipo.int/pub/published_pct_sequences.
(
)   Sequence 13 BP; 7 A; 1 C; 0 G; 4 T; 1 other;

Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

,       1043 ATTATTTATGTAT 1055
             ||||||||||||:
)          13 ATTATTTATGTAY 1


3SULT 658
3F46540/c
)   ABF46540 standard; DNA; 13 BP.
(
:   ABF46540;
(
P   21-FEB-2002  (first entry)
(
3   Oligonucleotide SEQ ID NO 146537 for detecting SNP TSC0036949.
(
W   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
W   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
W   central nervous system; gastrointestinal; respiratory; immune; metabolic.
(
S   Homo sapiens.
(
W   WO200177384-A2.
(
)   18-OCT-2001.
(
?   06-APR-2001; 2001WO-IB00713.
(
2   07-APR-2000; 2000DE-1019173.
(
\   (EPIG-) EPIGENOMICS AG.

XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 146537; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 6 A; 0 C; 2 G; 4 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        718 AACTTTAATTTCA 730
              :||||||||||||
Db         13 RACTTTAATTTCA 1


RESULT 659
ABF46541
ID   ABF46541 standard; DNA; 13 BP.
XX
AC   ABF46541;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 146538 for detect ng SNP TSC0036949.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 146538; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
```

```
'C   and cytosine methylation status in chemically pretreated genomic DNA. The
'C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
'C   range of diseases including immune system, gastrointestinal, respiratory,
'C   central nervous system, cardiovascular and metabolic disorders. The
C    oligomers are also used for detecting cell type differentiation.
C    ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C    ABI00010-ABI82073 represent the oligomers described in the invention.
C    NOTE: The sequence data for this patent did not form part of the printed
C    specification, but was obtained in electronic format from WIPO at
C    ftp.wipo.int/pub/published_pct_sequences.
X
Q    Sequence 13 BP; 4 A; 2 C; 0 G; 6 T; 1 other;

 Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
 Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
 Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       718 AACTTTAATTTCA 730
             :||||||||||||
Db         1 RACTTTAATTTCA 13


ESULT 660
BF52838
D    ABF52838 standard; DNA; 13 BP.
X
C    ABF52838;
X
T    21-FEB-2002  (first entry)
X
E    Oligonucleotide SEQ ID NO 152835 for detecting SNP TSC0038627.
X
W    SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
W    peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
W    central nervous system; gastrointestinal; respiratory; immune; metabolic.
X
S    Homo sapiens.
X
N    WO200177384-A2.
X
D    18-OCT-2001.
X
F    06-APR-2001; 2001WO-IB00713.
X
R    07-APR-2000; 2000DE-1019173.
X
A    (EPIG-) EPIGENOMICS AG.
X
I    Olek A,  Piepenbrock C,  Berlin K;
X
R    WPI; 2001-657177/75.
X
T    Set of oligonucleotides, useful for diagnosis and cell typing, is
T    designed to detect single nucleotide polymorphisms and cytosine
T    methylation status  -
X
S    Claim 1; SEQ ID 152835; 29pp + Sequence Listing; German.
X
C    This invention describes novel oligonucleotide primers or peptide nucleic
C    acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C    and cytosine methylation status in chemically pretreated genomic DNA. The
C    oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C    range of diseases including immune system, gastrointestinal, respiratory,
C    central nervous system, cardiovascular and metabolic disorders. The
C    oligomers are also used for detecting cell type differentiation.
C    ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C    ABI00010-ABI82073 represent the oligomers described in the invention.
C    NOTE: The sequence data for this patent did not form part of the printed
C    specification, but was obtained in electronic format from WIPO at
C    ftp.wipo.int/pub/published_pct_sequences.
X
Q    Sequence 13 BP; 4 A; 0 C; 2 G; 6 T; 1 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1164 AATGATGTTTTAT 1176
              |||||||||||:
Db          1 AATGATGTTTTAY 13


RESULT 661
ABF52839/c
ID   ABF52839 standard; DNA; 13 BP.
XX
AC   ABF52839;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 152836 for detecting SNP TSC0038627.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 152836; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 6 A; 2 C; 0 G; 4 T; 1 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1164 AATGATGTTTTAT 1176
              |||||||||||:
Db         13 AATGATGTTTTAY 1


RESULT 662
ABF53002
ID   ABF53002 standard; DNA; 13 BP.
XX
```

ABF53002;

21-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 152999 for detecting SNP TSC0038671.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 152999; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 4 A; 0 C; 0 G; 8 T; 1 other;

```
Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

      1522 TTATATTTTTAAC 1534
           ||||||||||||:
         1 TTATATTTTTAAY 13
```

RESULT 663
ABF53003/c
ABF53003 standard; DNA; 13 BP.

ABF53003;

21-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 153000 for detecting SNP TSC0038671.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 153000; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 8 A; 0 C; 0 G; 4 T; 1 other;

```
  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1522 TTATATTTTTAAC 1534
              ||||||||||||:
Db         13 TTATATTTTTAAY 1
```

RESULT 664
ABF54452
ABF54452 standard; DNA; 13 BP.

ABF54452;

21-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 154449 for detecting SNP TSC0039034.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

```
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 154449; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
Q   Sequence 13 BP; 3 A; 0 C; 1 G; 8 T; 1 other;

 Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
 Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
 Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

y       1044 TTATTTATGTATT 1056
             ||||||||||||:
b          1 TTATTTATGTATY 13


ESULT 665
BF54453/c
D   ABF54453 standard; DNA; 13 BP.
X
C   ABF54453;
X
T   21-FEB-2002  (first entry)
X
E   Oligonucleotide SEQ ID NO 154450 for detecting SNP TSC0039034.
X
W   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
W   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
W   central nervous system; gastrointestinal; respiratory; immune; metabolic.
X
S   Homo sapiens.
X
N   WO200177384-A2.
X
D   18-OCT-2001.
X
F   06-APR-2001; 2001WO-IB00713.
X
R   07-APR-2000; 2000DE-1019173.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Olek A,  Piepenbrock C,  Berlin K;
X
R   WPI; 2001-657177/75.
X
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 154450; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
SQ  Sequence 13 BP; 8 A; 1 C; 0 G; 3 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1044 TTATTTATGTATT 1056
              ||||||||||||:
Db         13 TTATTTATGTATY 1


RESULT 666
ABF57444/c
ID  ABF57444 standard; DNA; 13 BP.
XX
AC  ABF57444;
XX
DT  21-FEB-2002  (first entry)
XX
DE  Oligonucleotide SEQ ID NO 157441 for detecting SNP TSC0007219.
XX
KW  SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW  peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW  central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS  Homo sapiens.
XX
PN  WO200177384-A2.
XX
PD  18-OCT-2001.
XX
PF  06-APR-2001; 2001WO-IB00713.
XX
PR  07-APR-2000; 2000DE-1019173.
XX
PA  (EPIG-) EPIGENOMICS AG.
XX
PI  Olek A,  Piepenbrock C,  Berlin K;
XX
DR  WPI; 2001-657177/75.
XX
PT  Set of oligonucleotides, useful for diagnosis and cell typing, is
PT  designed to detect single nucleotide polymorphisms and cytosine
PT  methylation status  -
XX
PS  Claim 1; SEQ ID 157441; 29pp + Sequence Listing; German.
XX
CC  This invention describes novel oligonucleotide primers or peptide nucleic
CC  acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC  and cytosine methylation status in chemically pretreated genomic DNA. The
CC  oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC  range of diseases including immune system, gastrointestinal, respiratory,
CC  central nervous system, cardiovascular and metabolic disorders. The
CC  oligomers are also used for detecting cell type differentiation.
CC  ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC  ABI00010-ABI82073 represent the oligomers described in the invention.
CC  NOTE: The sequence data for this patent did not form part of the printed
CC  specification, but was obtained in electronic format from WIPO at
CC  ftp.wipo.int/pub/published_pct_sequences.
XX
SQ  Sequence 13 BP; 7 A; 0 C; 0 G; 5 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1482 ATAATATTATTTA 1494
```

```
          :||||||||||||
        13 RTAATATTATTTA 1


SULT 667
F57445
   ABF57445 standard; DNA; 13 BP.

   ABF57445;

   21-FEB-2002  (first entry)

   Oligonucleotide SEQ ID NO 157442 for detecting SNP TSC0007219.

   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
   central nervous system; gastrointestinal; respiratory; immune; metabolic.

   Homo sapiens.

   WO200177384-A2.

   18-OCT-2001.

   06-APR-2001; 2001WO-IB00713.

   07-APR-2000; 2000DE-1019173.

   (EPIG-) EPIGENOMICS AG.

   Olek A,  Piepenbrock C,  Berlin K;

   WPI; 2001-657177/75.

   Set of oligonucleotides, useful for diagnosis and cell typing, is
   designed to detect single nucleotide polymorphisms and cytosine
   methylation status  -

   Claim 1; SEQ ID 157442; 29pp + Sequence Listing; German.

   This invention describes novel oligonucleotide primers or peptide nucleic
   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
   and cytosine methylation status in chemically pretreated genomic DNA. The
   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
   range of diseases including immune system, gastrointestinal, respiratory,
   central nervous system, cardiovascular and metabolic disorders. The
   oligomers are also used for detecting cell type differentiation.
   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
   ABI00010-ABI82073 represent the oligomers described in the invention.
   NOTE: The sequence data for this patent did not form part of the printed
   specification, but was obtained in electronic format from WIPO at
   ftp.wipo.int/pub/published_pct_sequences.

   Sequence 13 BP; 5 A; 0 C; 0 G; 7 T; 1 other;

Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

       1482 ATAATATTATTTA 1494
            :||||||||||||
          1 RTAATATTATTTA 13


SULT 668
F59176
   ABF59176 standard; DNA; 13 BP.

   ABF59176;

   21-FEB-2002  (first entry)

   Oligonucleotide SEQ ID NO 159173 for detecting SNP TSC0040076.

XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 159173; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 2 A; 0 C; 1 G; 9 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         986 TTTAAGTTTTTTC 998
               |||||||||||:
Db           1 TTTAAGTTTTTTY 13


RESULT 669
ABF59177/c
ID   ABF59177 standard; DNA; 13 BP.
XX
AC   ABF59177;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 159174 for detecting SNP TSC0040076.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
```

```
R   07-APR-2000; 2000DE-1019173.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Olek A,  Piepenbrock C,  Berlin K;
X
R   WPI; 2001-657177/75.
X
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 159174; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
Q   Sequence 13 BP; 9 A; 1 C; 0 G; 2 T; 1 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        986 TTTAAGTTTTTTC 998
              ||||||||||||:
Db         13 TTTAAGTTTTTTY 1


RESULT 670
ABF72046/c
ID  ABF72046 standard; DNA; 13 BP.
XX
AC  ABF72046;
XX
DT  22-FEB-2002  (first entry)
XX
DE  Oligonucleotide SEQ ID NO 172043 for detecting SNP TSC0042899.
XX
KW  SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW  peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW  central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS  Homo sapiens.
XX
PN  WO200177384-A2.
XX
PD  18-OCT-2001.
XX
PF  06-APR-2001; 2001WO-IB00713.
XX
PR  07-APR-2000; 2000DE-1019173.
XX
PA  (EPIG-) EPIGENOMICS AG.
XX
PI  Olek A,  Piepenbrock C,  Berlin K;
XX
DR  WPI; 2001-657177/75.
XX
PT  Set of oligonucleotides, useful for diagnosis and cell typing, is
PT  designed to detect single nucleotide polymorphisms and cytosine
PT  methylation status  -
XX
PS  Claim 1; SEQ ID 172043; 29pp + Sequence Listing; German.
XX
CC  This invention describes novel oligonucleotide primers or peptide nucleic
CC  acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC  and cytosine methylation status in chemically pretreated genomic DNA. The
CC  oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC  range of diseases including immune system, gastrointestinal, respiratory,
CC  central nervous system, cardiovascular and metabolic disorders. The
CC  oligomers are also used for detecting cell type differentiation.
CC  ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC  ABI00010-ABI82073 represent the oligomers described in the invention.
CC  NOTE: The sequence data for this patent did not form part of the printed
CC  specification, but was obtained in electronic format from WIPO at
CC  ftp.wipo.int/pub/published_pct_sequences.
XX
SQ  Sequence 13 BP; 3 A; 0 C; 2 G; 7 T; 1 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        769 ATCACATAAAAAT 781
              :|||||||||||
Db         13 RTCACATAAAAAT 1


RESULT 671
ABF72047
ID  ABF72047 standard; DNA; 13 BP.
XX
AC  ABF72047;
XX
DT  22-FEB-2002  (first entry)
XX
DE  Oligonucleotide SEQ ID NO 172044 for detecting SNP TSC0042899.
XX
KW  SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW  peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW  central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS  Homo sapiens.
XX
PN  WO200177384-A2.
XX
PD  18-OCT-2001.
XX
PF  06-APR-2001; 2001WO-IB00713.
XX
PR  07-APR-2000; 2000DE-1019173.
XX
PA  (EPIG-) EPIGENOMICS AG.
XX
PI  Olek A,  Piepenbrock C,  Berlin K;
XX
DR  WPI; 2001-657177/75.
XX
PT  Set of oligonucleotides, useful for diagnosis and cell typing, is
PT  designed to detect single nucleotide polymorphisms and cytosine
PT  methylation status  -
XX
PS  Claim 1; SEQ ID 172044; 29pp + Sequence Listing; German.
XX
CC  This invention describes novel oligonucleotide primers or peptide nucleic
CC  acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC  and cytosine methylation status in chemically pretreated genomic DNA. The
CC  oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC  range of diseases including immune system, gastrointestinal, respiratory,
CC  central nervous system, cardiovascular and metabolic disorders. The
CC  oligomers are also used for detecting cell type differentiation.
CC  ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC  ABI00010-ABI82073 represent the oligomers described in the invention.
CC  NOTE: The sequence data for this patent did not form part of the printed
CC  specification, but was obtained in electronic format from WIPO at
CC  ftp.wipo.int/pub/published_pct_sequences.
```

Sequence 13 BP; 7 A; 2 C; 0 G; 3 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

769 ATCACATAAAAAT 781
:||||||||||||
1 RTCACATAAAAAT 13

SULT 672
F76626
ABF76626 standard; DNA; 13 BP.

ABF76626;

22-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 176623 for detecting SNP TSC0043824.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is
designed to detect single nucleotide polymorphisms and cytosine
methylation status -

Claim 1; SEQ ID 176623; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic
acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
and cytosine methylation status in chemically pretreated genomic DNA. The
oligonucleotides are used for diagnosis and/or prognosis of cancer and a
range of diseases including immune system, gastrointestinal, respiratory,
central nervous system, cardiovascular and metabolic disorders. The
oligomers are also used for detecting cell type differentiation.
ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
ABI00010-ABI82073 represent the oligomers described in the invention.
NOTE: The sequence data for this patent did not form part of the printed
specification, but was obtained in electronic format from WIPO at
ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 3 A; 0 C; 1 G; 8 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

1045 TATTTATGTATTT 1057
||||||||||||:
1 TATTTATGTATTY 13

SULT 673
ABF76627/c
ID ABF76627 standard; DNA; 13 BP.
XX
AC ABF76627;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 176624 for detecting SNP TSC0043824.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 176624; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 8 A; 1 C; 0 G; 3 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1045 TATTTATGTATTT 1057
||||||||||||:
Db 13 TATTTATGTATTY 1

RESULT 674
ABF78844/c
ID ABF78844 standard; DNA; 13 BP.
XX
AC ABF78844;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 178841 for detecting SNP TSC0044293.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX

S Homo sapiens.
X
N WO200177384-A2.
X
D 18-OCT-2001.
X
F 06-APR-2001; 2001WO-IB00713.
X
R 07-APR-2000; 2000DE-1019173.
X
A (EPIG-) EPIGENOMICS AG.
X
I Olek A, Piepenbrock C, Berlin K;
X
R WPI; 2001-657177/75.
X
T Set of oligonucleotides, useful for diagnosis and cell typing, is
T designed to detect single nucleotide polymorphisms and cytosine
T methylation status -
X
S Claim 1; SEQ ID 178841; 29pp + Sequence Listing; German.
X
C This invention describes novel oligonucleotide primers or peptide nucleic
C acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C and cytosine methylation status in chemically pretreated genomic DNA. The
C oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C range of diseases including immune system, gastrointestinal, respiratory,
C central nervous system, cardiovascular and metabolic disorders. The
C oligomers are also used for detecting cell type differentiation.
C ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C ABI00010-ABI82073 represent the oligomers described in the invention.
C NOTE: The sequence data for this patent did not form part of the printed
C specification, but was obtained in electronic format from WIPO at
C ftp.wipo.int/pub/published_pct_sequences.
X
Q Sequence 13 BP; 8 A; 0 C; 1 G; 3 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1560 AAATTTTTTTTAC 1572
:||||||||||||
Db 13 RAATTTTTTTTAC 1

RESULT 675
ABF78845
ID ABF78845 standard; DNA; 13 BP.
XX
AC ABF78845;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 178842 for detecting SNP TSC0044293.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 178842; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 3 A; 1 C; 0 G; 8 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1560 AAATTTTTTTTAC 1572
:||||||||||||
Db 1 RAATTTTTTTTAC 13

RESULT 676
ABF79012
ID ABF79012 standard; DNA; 13 BP.
XX
AC ABF79012;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 179009 for detecting SNP TSC0044323.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 179009; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a

range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 5 A; 0 C; 1 G; 6 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Qy       1133 TTATAGTAAATTT 1145
              ||||||||||||:
Db          1 TTATAGTAAATTY 13
```

SULT 677
F79013/c
ABF79013 standard; DNA; 13 BP.

ABF79013;

22-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 179010 for detecting SNP TSC0044323.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 179010; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 6 A; 1 C; 0 G; 5 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy       1133 TTATAGTAAATTT 1145
              ||||||||||||:
Db          13 TTATAGTAAATTY 1
```

RESULT 678
ABF98558
ID ABF98558 standard; DNA; 13 BP.
XX
AC ABF98558;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 198555 for detecting SNP TSC0048858.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 198555; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 5 A; 0 C; 1 G; 6 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy        523 AAATTTGAATTTC 535
              ||||||||||||:
Db          1 AAATTTGAATTTY 13
```

RESULT 679
ABF98559/c
ID ABF98559 standard; DNA; 13 BP.
XX
AC ABF98559;
XX

```
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 198556 for detecting SNP TSC0048858.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 198556; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 6 A; 1 C; 0 G; 5 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        523 AAATTTGAATTTC 535
              ||||||||||||:
Db         13 AAATTTGAATTTY 1


RESULT 680
ABH23016
ID   ABH23016 standard; DNA; 13 BP.
XX
AC   ABH23016;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 222993 for detecting SNP TSC0054291.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 222993; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 3 A; 0 C; 1 G; 8 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1282 ATTATTGTTTATC 1294
              |||||||||||:
Db          1 ATTATTGTTTATY 13


RESULT 681
ABH23017/c
ID   ABH23017 standard; DNA; 13 BP.
XX
AC   ABH23017;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 222994 for detecting SNP TSC0054291.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
```

T methylation status -
X
S Claim 1; SEQ ID 222994; 29pp + Sequence Listing; German.
X
C This invention describes novel oligonucleotide primers or peptide nucleic
C acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C and cytosine methylation status in chemically pretreated genomic DNA. The
C oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C range of diseases including immune system, gastrointestinal, respiratory,
C central nervous system, cardiovascular and metabolic disorders. The
C oligomers are also used for detecting cell type differentiation.
C ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C ABI00010-ABI82073 represent the oligomers described in the invention.
C NOTE: The sequence data for this patent did not form part of the printed
C specification, but was obtained in electronic format from WIPO at
C ftp.wipo.int/pub/published_pct_sequences.
C
S Sequence 13 BP; 8 A; 1 C; 0 G; 3 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1282 ATTATTGTTTATC 1294
:|||||||||||:
Db 13 ATTATTGTTTATY 1

RESULT 682
ABH36948/c
ID ABH36948 standard; DNA; 13 BP.
XX
AC ABH36948;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 236925 for detecting SNP TSC0057806.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 236925; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 9 A; 0 C; 1 G; 2 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1561 AATTTTTTTTACT 1573
:|||||||||||
Db 13 RATTTTTTTTACT 1

RESULT 683
ABH36949
ID ABH36949 standard; DNA; 13 BP.
XX
AC ABH36949;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 236926 for detecting SNP TSC0057806.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 236926; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 2 A; 1 C; 0 G; 9 T; 1 other;

Query Match 1.0%; Score 12.6; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 3.7e+02;
Matches 12; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1561 AATTTTTTTTACT 1573
:|||||||||||
Db 1 RATTTTTTTTACT 13

```
ESULT 684
BH40538/c
D   ABH40538 standard; DNA; 13 BP.
X
C   ABH40538;
X
T   22-FEB-2002  (first entry)
X
E   Oligonucleotide SEQ ID NO 240515 for detecting SNP TSC0058679.
X
W   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
W   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
W   central nervous system; gastrointestinal; respiratory; immune; metabolic.
X
S   Homo sapiens.
X
N   WO200177384-A2.
X
D   18-OCT-2001.
X
F   06-APR-2001; 2001WO-IB00713.
X
R   07-APR-2000; 2000DE-1019173.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Olek A,  Piepenbrock C,  Berlin K;
X
R   WPI; 2001-657177/75.
X
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 240515; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
Q   Sequence 13 BP; 1 A; 0 C; 2 G; 9 T; 1 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        621 AAACAACAAATAA 633
              :|||||||||||
Db         13 RAACAACAAATAA 1


RESULT 685
ABH40539
ID   ABH40539 standard; DNA; 13 BP.
XX
AC   ABH40539;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 240516 for detecting SNP TSC0058679.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 240516; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 9 A; 2 C; 0 G; 1 T; 1 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        621 AAACAACAAATAA 633
              :|||||||||||
Db          1 RAACAACAAATAA 13


RESULT 686
ABH50358
ID   ABH50358 standard; DNA; 13 BP.
XX
AC   ABH50358;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 250335 for detecting SNP TSC0061125.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
```

```
A   (EPIG-) EPIGENOMICS AG.
K
I   Olek A,  Piepenbrock C,  Berlin K;
K
R   WPI; 2001-657177/75.
C
P   Set of oligonucleotides, useful for diagnosis and cell typing, is
P   designed to detect single nucleotide polymorphisms and cytosine
P   methylation status  -
C
S   Claim 1; SEQ ID 250335; 29pp + Sequence Listing; German.
C
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
C
S   Sequence 13 BP; 2 A; 0 C; 2 G; 8 T; 1 other;

Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

       1455 TTGTTTATTATGT 1467
            ||||||||||||:
          1 TTGTTTATTATGY 13


ESULT 687
BH50359/c
   ABH50359 standard; DNA; 13 BP.

   ABH50359;

   22-FEB-2002  (first entry)

   Oligonucleotide SEQ ID NO 250336 for detecting SNP TSC0061125.

   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
   central nervous system; gastrointestinal; respiratory; immune; metabolic.

   Homo sapiens.

   WO200177384-A2.

   18-OCT-2001.

   06-APR-2001; 2001WO-IB00713.

   07-APR-2000; 2000DE-1019173.

   (EPIG-) EPIGENOMICS AG.

   Olek A,  Piepenbrock C,  Berlin K;

   WPI; 2001-657177/75.

   Set of oligonucleotides, useful for diagnosis and cell typing, is
   designed to detect single nucleotide polymorphisms and cytosine
   methylation status  -

   Claim 1; SEQ ID 250336; 29pp + Sequence Listing; German.

   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 8 A; 2 C; 0 G; 2 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1455 TTGTTTATTATGT 1467
              ||||||||||||:
Db         13 TTGTTTATTATGY 1


RESULT 688
ABH58638
ID   ABH58638 standard; DNA; 13 BP.
XX
AC   ABH58638;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 258615 for detecting SNP TSC0062878.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 258615; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 3 A; 0 C; 2 G; 7 T; 1 other;
```

```
  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        545 TGAATAGTTTTTC 557
              ||||||||||||:
Db          1 TGAATAGTTTTTY 13


RESULT 689
ABH58639/c
ID   ABH58639 standard; DNA; 13 BP.
XX
AC   ABH58639;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 258616 for detecting SNP TSC0062878.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 258616; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 7 A; 2 C; 0 G; 3 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        545 TGAATAGTTTTTC 557
              ||||||||||||:
Db         13 TGAATAGTTTTTY 1


RESULT 690
ABH60060
ID   ABH60060 standard; DNA; 13 BP.
XX
AC   ABH60060;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 260037 for detecting SNP TSC0007828.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB00713.
XX
PR   07-APR-2000; 2000DE-1019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single nucleotide polymorphisms and cytosine
PT   methylation status  -
XX
PS   Claim 1; SEQ ID 260037; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 4 A; 0 C; 1 G; 7 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1428 TATTAGTAATTTC 1440
              ||||||||||||:
Db          1 TATTAGTAATTTY 13


RESULT 691
ABH60061/c
ID   ABH60061 standard; DNA; 13 BP.
XX
AC   ABH60061;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 260038 for detecting SNP TSC0007828.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
```

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 260038; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 7 A; 1 C; 0 G; 4 T; 1 other;

```
Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

      1428 TATTAGTAATTTC 1440
           ||||||||||||:
        13 TATTAGTAATTTY 1
```

RESULT 692
ABH64678
ABH64678 standard; DNA; 13 BP.

ABH64678;

22-FEB-2002 (first entry)

Oligonucleotide SEQ ID NO 264655 for detecting SNP TSC0064161.

SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

Homo sapiens.

WO200177384-A2.

18-OCT-2001.

06-APR-2001; 2001WO-IB00713.

07-APR-2000; 2000DE-1019173.

(EPIG-) EPIGENOMICS AG.

Olek A, Piepenbrock C, Berlin K;

WPI; 2001-657177/75.

Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

Claim 1; SEQ ID 264655; 29pp + Sequence Listing; German.

This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences.

Sequence 13 BP; 7 A; 0 C; 0 G; 5 T; 1 other;

```
Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1616 TAAAATATAATTT 1628
              |||||||||||:
Db          1 TAAAATATAATTY 13
```

RESULT 693
ABH64679/c
ID ABH64679 standard; DNA; 13 BP.

AC ABH64679;

DT 22-FEB-2002 (first entry)

DE Oligonucleotide SEQ ID NO 264656 for detecting SNP TSC0064161.

KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.

OS Homo sapiens.

PN WO200177384-A2.

PD 18-OCT-2001.

PP 06-APR-2001; 2001WO-IB00713.

PR 07-APR-2000; 2000DE-1019173.

PA (EPIG-) EPIGENOMICS AG.

PI Olek A, Piepenbrock C, Berlin K;

DR WPI; 2001-657177/75.

PT Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single nucleotide polymorphisms and cytosine methylation status -

PS Claim 1; SEQ ID 264656; 29pp + Sequence Listing; German.

CC This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The

```
CC   oligomers are also used for detecting cell type differentiation.
CC   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC   ABI00010-ABI82073 represent the oligomers described in the invention.
CC   NOTE: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 13 BP; 5 A; 0 C; 0 G; 7 T; 1 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 3.7e+02;
  Matches   12;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1616 TAAAATATAATTT 1628
              ||||||||||||:
Db         13 TAAAATATAATTY 1


RESULT 694
AAD49641
ID   AAD49641 standard; mRNA; 15 BP.
XX
AC   AAD49641;
XX
DT   24-MAR-2003  (first entry)
XX
DE   Human adenylate uridylate-rich element (ARE) motif mRNA #3.
XX
KW   Amyloidosis; haemophilia; Alzheimer's disease; atherosclerosis; cancer;
KW   gigantism; dwarfism; hypothyroidism; hyperthyroidism; cystic fibrosis;
KW   autoimmune disorder; aging; inflammation; diabetes; obesity; anorectic;
KW   neurodegenerative disorder; Parkinson's disease; gene therapy; virucide;
KW   haemostatic; antibacterial; nootropic; neuroprotective; cytostatic;
KW   fungicide; human; adenylate uridylate-rich element; ARE; ss.
XX
OS   Homo sapiens.
XX
PN   WO200283953-A1.
XX
PD   24-OCT-2002.
XX
PF   11-APR-2002; 2002WO-US11757.
XX
PR   11-APR-2001; 2001US-282965P.
XX
PA   (PTCT-) PTC THERAPEUTICS INC.
XX
PI   Rando R,  Welch E;
XX
DR   WPI; 2003-075561/07.
XX
PT   Identifying a test compound that binds to a target RNA molecule for
PT   treating or preventing amyloidosis, hemophilia, cancer, gigantism,
PT   diabetes, by contacting a detectably labeled target RNA molecule with a
PT   library of test compounds -
XX
PS   Disclosure; Page 18; 152pp; English.
XX
CC   The invention relates to a method for identifying a test compound that
CC   binds to a target RNA molecule, which comprises contacting a detectably
CC   labelled target RNA molecule with a library of test compounds under
CC   conditions that permit direct binding of the labelled target RNA to a
CC   member of the library of test compounds so that a detectably labeled
CC   target RNA:test compound complex is formed. The method is useful for
CC   screening libraries of compounds for those that are selectively bind to
CC   a pre-selected target RNA. The compounds are useful for inhibiting the
CC   formation of a specific bound RNA:host cell factor complexes in vivo.
CC   They are also useful for treating or preventing diseases associated
CC   with overproduction or decreased protein function, such as amyloidosis,
CC   haemophilia, Alzheimer's disease, atherosclerosis, cancer, gigantism,
CC   dwarfism, hypothyroidism, hyperthyroidism, autoimmune disorders, aging,
CC   inflammation, cystic fibrosis, diabetes, obesity, neurodegenerative
CC   disorders, Parkinson's disease or infections (bacterial, viral, fungal).
CC   The invention is also used in gene therapy. The present sequence is
CC   human adenylate uridylate-rich element (ARE) motif mRNA. This sequence
CC   is used to illustrate the method of the invention.
XX
SQ   Sequence 15 BP; 4 A; 0 C; 0 G; 9 U; 2 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 4.2e+02;
  Matches    4;  Conservative    10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1045 TATTTATGTATTTAT 1059
              :|:::|: :|:::|:
Db          1 WAUUUAUUUAUUUAW 15


RESULT 695
AAL50230
ID   AAL50230 standard; mRNA; 15 BP.
XX
AC   AAL50230;
XX
DT   13-FEB-2003  (first entry)
XX
DE   Human ARE-mRNA sequence #3.
XX
KW   ARE-mRNA; protein secretion inhibition; ARE-mRNA regulation;
KW   inflammation; arthritis; autoimmune disease; septic shock; blood clot;
KW   stroke; TNFalpha; tumour necrosis factor alpha; antiinflammatory;
KW   antiarthritic; antibacterial; immunosuppressive; cerebroprotective;
KW   antipyretic; immunomodulator; adenylate-uridylate rich element; ss.
XX
OS   Homo sapiens.
XX
PN   WO200283842-A2.
XX
PD   24-OCT-2002.
XX
PF   08-APR-2002; 2002WO-US10898.
XX
PR   10-APR-2001; 2001US-282974P.
XX
PA   (MESS-) MESSAGE PHARM INC.
XX
PI   Giordano T,  Sturgess MA;
XX
DR   WPI; 2003-046924/04.
XX
PT   Modulating Adenylate-Uridylate Rich element-mRNA regulation involves
PT   administering new amide compound that inhibits secretion of protein
PT   encoded by ARE-mRNA, useful for treating inflammation, arthritis and
PT   autoimmune diseases -
XX
PS   Disclosure; Fig 5; 147pp; English.
XX
CC   The present invention relates to a method of modulating the regulation of
CC   an adenylate-uridylate rich element (ARE)-mRNA, which involves
CC   administering new compounds that inhibits secretion of a protein encoded
CC   by an ARE-mRNA. This can be used in the treatment of inflammation,
CC   arthritis, autoimmune diseases, septic shock, blood clot, stroke, fever,
CC   acute respiratory distress syndrome (ARDS) and cachexia. The present
CC   sequence is an ARE-mRNA shown in the exemplification of the invention.
XX
SQ   Sequence 15 BP; 4 A; 0 C; 0 G; 1 T; 8 U; 2 other;

  Query Match             1.0%;  Score 12.6;  DB 1;  Length 15;
  Best Local Similarity   33.3%;  Pred. No. 4.2e+02;
  Matches    5;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1045 TATTTATGTATTTAT 1059
              :||::|: :|:::|:
Db          1 WATUUAUUUAUUUAW 15
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ESULT 696
AL53709
D AAL53709 standard; RNA; 15 BP.
C
C AAL53709;
C
C 07-FEB-2003 (first entry)
C
C Adenylate Uridylate-rich element motif SEQ ID No 3.
C
C Target RNA; target RNA:support-attached test compound; flow cytometry;
C mass spectrometry; high-throughput screening; RNA motif; ss.
C
C Homo sapiens.
C
C WO200283837-A1.
C
C 24-OCT-2002.
C
C 11-APR-2002; 2002WO-US11758.
C
C 11-APR-2001; 2001US-282966P.
C
C (PTCT-) PTC THERAPEUTICS INC.
C
C Almstead NG;
C
C WPI; 2003-075534/07.
C
C Identifying a test compound that binds to a target RNA molecule by
C separating the detectably labeled target RNA:support-attached test
C compound complex from uncomplexed target RNA molecules and test
C compounds by flow cytometry -
K
S Disclosure; Page 16; 131pp; English.
K
C The invention relates to a novel method for identifying a test compound
C that binds to a target RNA molecule comprising separating the detectably
C labeled target RNA:support-attached test compound complex from
C uncomplexed target RNA molecules and test compounds. The separating
C process is carried out by flow cytometry and determining a structure of
C the type of test compound of the RNA:support-attached test compound
C complex by mass spectrometry. The method is useful for high-throughput
C screening of libraries of compounds to identify pharmaceutical leads.
C This polynucleotide sequence represents one of the target RNA motifs/
C regions of the invention.
K
Q Sequence 15 BP; 4 A; 0 C; 0 G; 9 U; 2 other;

Query Match 1.0%; Score 12.6; DB 1; Length 15;
Best Local Similarity 26.7%; Pred. No. 4.2e+02;
Matches 4; Conservative 10; Mismatches 1; Indels 0; Gaps 0;

y 1045 TATTTATGTATTTAT 1059
:|:::|: :|:::|:
b 1 WAUUUAUUUAUUUAW 15

ESULT 697
AN71403
D AAN71403 standard; DNA; 17 BP.
K
C AAN71403;
X
T 25-MAR-2003 (updated)
T 18-APR-1991 (first entry)
X
E Sequence of hybridization probe to detect the H. grisea
E glucoamylase gene based on GA1 peptide.
X
W Enzyme; fungal expression vector; Aspergillus expression vector;
W Trichoderma; ss.
K

OS Humicola grisea.
XX
PN EP215594-A.
XX
PD 25-MAR-1987.
XX
PF 27-AUG-1986; 86EP-0306624.
XX
PR 29-AUG-1985; 85US-0771374.
PR 29-AUG-1985; 85US-0771394.
PR 07-JUL-1986; 86US-0882224.
XX
PA (GEMV) GENENCOR INC.
XX
PI Cullen D, Gray GL, Hayenga KJ, Lawlis VB;
XX
DR WPI; 1987-095049/14.
XX
PT New DNA sequences for expressing polypeptide in filamentous fungi
PT - with secretion of prod. from the cells, and new vectors and
PT transformed fungi
XX
PS Example; Fig 20; 45pp; English.
XX
CC A DNA sequence coding for a heterologous polypeptide which can be
CC expressed in and secreted from filamentous fungi is claimed. Pref.
CC the DNA sequence codes for bovine preprochymosin, M. meihei
CC preprocarboxyl protease or A. niger preproglucoamylase. Also new
CC are vectors consisting of the DNA sequence plus an operably-linked
CC signal sequence. The vectors may also include a sequence which
CC increases transformation efficiency, e.g. ANS-1.
CC (Updated on 25-MAR-2003 to correct PR field.)
CC (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ Sequence 17 BP; 8 A; 1 C; 0 G; 3 T; 5 other;

Query Match 1.0%; Score 12.6; DB 1; Length 17;
Best Local Similarity 66.7%; Pred. No. 4.7e+02;
Matches 10; Conservative 5; Mismatches 0; Indels 0; Gaps 0;

Qy 1271 AGTATAAGTACATTA 1285
|:||:||:||:||:|
Db 2 ARTAYAARTAYATHA 16

RESULT 698
AAQ78885
ID AAQ78885 standard; DNA; 17 BP.
XX
AC AAQ78885;
XX
DT 25-MAR-2003 (updated)
DT 18-DEC-1995 (first entry)
XX
DE Humicola grisea glucoamylase hybridization probe.
XX
KW Glucoamylase; DNA probe; gene cloning; protein secretion; ss.
XX
OS Synthetic.
XX
PN EP625577-A1.
XX
PD 23-NOV-1994.
XX
PF 27-AUG-1986; 94EP-0201751.
XX
PR 29-AUG-1985; 85US-0771374.
PR 07-JUL-1986; 86US-0882224.
PR 27-AUG-1986; 86EP-0306624.
XX
PA (GEMV) GENENCOR INT INC.
XX
PI Berka RM, Cullen D, Gray GL, Hayenga KJ, Lawlis VB;

```
X
R   WPI; 1994-359750/45.
X
T   Vectors and DNA for expressing polypeptide(s) in filamentous fungi
T   - include secretory signal sequences that are native or foreign to
T   heterologous polypeptide(s), such as chymosin or glucoamylase.
X
S   Example 9A3; Page 22; 50pp; English.
X
C   The DNA probe and corresponding probes covering the degenerate
C   sites (AAQ78886-Q78891) correspond to amino acids 17-22 of the
C   H. grisea glucoamylase peptide GA1 (AAR62933), and are used as
C   hybridization probes to detect and isolate H. grisea glucoamylase
C   DNA in a Southern blot.  Resulting genomic DNA fragments are
C   excised and cloned in plasmid pRSH1.  This illustrates the main
C   claims of the patent, i.e. a vector containing (i) DNA encoding
C   a heterologous polypeptide (chymosin, prochymosin, preprochymosin,
C   Aspergillus niger glucoamylase, H. grisea glucoamylase, or Mucor
C   miehei carboxyl protease) and (ii) a secretory signal peptide,
C   and a filamentous fungus (Aspergillus, Trichoderma, Neurospora,
C   Podospora, Endothia, Mucor, Cochiobolus or Pyriclaria, especially
C   A. nidulans, A. awamori or T. reesei) transformed with the vector
C   for recombinant protein (enzyme) production.
C   (Updated on 25-MAR-2003 to correct PF field.)
C   (Updated on 25-MAR-2003 to correct PR field.)
X
Q   Sequence 17 BP; 8 A; 1 C; 0 G; 3 T; 5 other;

 Query Match              1.0%;  Score 12.6;  DB 1;  Length 17;
 Best Local Similarity   66.7%;  Pred. No. 4.7e+02;
 Matches   10;  Conservative    5;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1271 AGTATAAGTACATTA 1285
              |:||:||:||:|||:|
Db          2 ARTAYAARTAYATHA 16


RESULT 699
ABK85464/c
ID  ABK85464 standard; cDNA; 18 BP.
XX
AC  ABK85464;
XX
DT  16-AUG-2002  (first entry)
XX
DE  5'-degenerate sequence of shrimp alkaline phosphatase (SAP) cDNA.
XX
KW  Shrimp; heat labile alkaline phosphatase; SAP; DNA sequencing reaction;
KW  cloning vector dephosphorylation; PCR amplification product-mixture;
KW  reporter enzyme; gene; ss.
XX
OS  Pandalus borealis.
XX
PN  WO200231157-A2.
XX
PD  18-APR-2002.
XX
PF  10-OCT-2001; 2001WO-GB04509.
XX
PR  10-OCT-2000; 2000GB-0024827.
XX
PA  (NOFI-) NORWEGIAN INST FISHERIES & AQUACULTURE.
PA  (GARD/) GARDNER R.
XX
PI  Gardner R,  Nilsen I,  Oeverboe K;
XX
DR  WPI; 2002-444182/47.
XX
PT  Novel recombinant heat labile shrimp alkaline phosphatase useful in
PT  molecular biology techniques, in the production of DNA based
PT  therapeutics or in forensic science, and for laboratory protocols -
XX
PS  Disclosure; Page 15; 54pp; English.
XX
CC  The present invention relates to the isolation of shrimp (Pandalus
CC  borealis) heat labile alkaline phosphatase (E.C. 3.1.3.1) referred
CC  to as SAP, and polynucleotide sequences encoding it. The SAP enzyme
CC  is useful in the dephosphorylation of cloning vectors prior to
CC  ligation reactions, in the treatment of PCR amplification
CC  product-mixtures prior to DNA sequencing reactions, in molecular
CC  biology techniques, in the production of DNA based therapeutics or
CC  in forensic science, for laboratory protocols, and as a reporter
CC  enzyme. The SAP enzyme is heat labile and cold active making it
CC  particularly suitable for use in multi-step laboratory protocols
CC  where a simple heating step deactivates the enzyme. The present
CC  sequence represents the missing 5'-sequence of the cDNA encoding
CC  SAP.
XX
SQ  Sequence 18 BP; 7 A; 1 C; 3 G; 2 T; 5 other;

  Query Match              1.0%;  Score 12.6;  DB 1;  Length 18;
  Best Local Similarity   66.7%;  Pred. No. 4.9e+02;
  Matches   12;  Conservative    3;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        886 CTTGTTCCACTGTGCCTT 903
              :||:|||||  |  ||:||
Db         18 YTTRTTCCARTANGCYTT 1


RESULT 700
AAV22349/c
ID  AAV22349 standard; RNA; 14 BP.
XX
AC  AAV22349;
XX
DT  29-JUN-1998  (first entry)
XX
DE  A promoter regulatory motif found in the utrons of the invention.
XX
KW  3' untranslated region; UTR; inhibition; gene expression; ICAM-7;
KW  interferon-gamma; IFN-gamma; major histocompatibility complex; MHC;
KW  antigen expression; gene promoter; utron; B7-1; B7-2; Fc gamma R;
KW  HIV gene expression; transplant rejection; treatment;
KW  autoimmune disease; inflammatory disease; ss.
XX
OS  Unidentified.
XX
PN  WO9744450-A1.
XX
PD  27-NOV-1997.
XX
PF  21-MAY-1997;  97WO-US09459.
XX
PR  21-MAY-1996;  96US-0646789.
XX
PA  (UYYA ) UNIV YALE.
XX
PI  Peyman JA;
XX
DR  WPI; 1998-018505/02.
XX
PT  Utrons, RNA molecules containing promoter regulatory motifs -
PT  useful to suppress express expression from promoter of interest,
PT  specifically TSU nucleic acid suppression of MHC Class I and II gene
PT  expression
XX
PS  Claim 20; Page 20; 200pp; English.
XX
CC  The present sequence represents a promoter regulatory element,
CC  found in the utrons of the invention. Utrons are from, or are
CC  homologous to, the 3' untranslated region (UTR), of an mRNA that
CC  stimulates or inhibits a cellular response by sequence specific
CC  interactions. The utron is able to suppress constitutive and
CC  interferon-gamma (IFN-gamma) induced major histocompatibility complex
CC  (MHC) class I and class II antigen expression and expression of other
CC  antigens, the gene promoters of which contain related sequence motifs
```

CC that are stimulated by the same factors which stimulate MHC class I and
CC class II antigen expression. Such utrons can be used to regulate
CC gene expression in a subject, e.g. a human or a cell in vitro,
CC specifically inhibiting MHC Class I or II, ICAM-7, B7-1, B7-2,
CC Fc gamma R, IL-2 or HIV gene expression. They can be used to inhibit
CC transplant rejection, or treat an autoimmune or inflammatory disease or
CC disorder.
XX
SQ Sequence 14 BP; 5 A; 2 C; 2 G; 5 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 14;
Best Local Similarity 92.9%; Pred. No. 4.3e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1016 TTTCAAGTGTAACT 1029
||||||||| ||||
Db 14 TTTCAAGTGAAACT 1

RESULT 701
AAV22279/c
ID AAV22279 standard; DNA; 14 BP.
XX
AC AAV22279;
XX
DT 29-JUN-1998 (first entry)
XX
DE ISRE gene promoter motif found in a trophoblast STAT utron.
XX
KW Trophoblast STAT utron; TSU; 3' untranslated region; UTR; inhibition;
KW interferon-gamma; IFN-gamma; major histocompatibility complex; MHC;
KW antigen expression; gene promoter; class I; class II; IFN signalling;
KW GAS; ISRE; interleukin-4 response element; gene expression; ICAM-7;
KW B7-1; B7-2; Fc gamma R; HIV gene expression; transplant rejection;
KW treatment; autoimmune disease; inflammatory disease; ss.
XX
OS Unidentified.
XX
PN WO9744450-A1.
XX
PD 27-NOV-1997.
XX
PF 21-MAY-1997; 97WO-US09459.
XX
PR 21-MAY-1996; 96US-0646789.
XX
PA (UYYA) UNIV YALE.
XX
PI Peyman JA;
XX
DR WPI; 1998-018505/02.
XX
PT Utrons, RNA molecules containing promoter regulatory motifs -
PT useful to suppress express expression from promoter of interest,
PT specifically TSU nucleic acid suppression of MHC Class I and II gene
PT expression
XX
PS Disclosure; Page 90; 200pp; English.
XX
CC The present sequence represents an ISRE gene promoter motif found
CC in a trophoblast STAT utron (TSU). TSUs be isolated from a CDNA
CC library prepared from mRNA isolated from trophoblast cells. Utrons are
CC from, or are homologous to, the 3' untranslated region (UTR), of an mRNA
CC that stimulates or inhibits a cellular response by sequence specific
CC interactions. The TSU is able to suppress constitutive and
CC interferon-gamma (IFN-gamma) induced major histocompatibility complex
CC (MHC) class I and class II antigen expression and expression of other
CC antigens, the gene promoters of which contain related sequence motifs
CC that are stimulated by the same factors which stimulate MHC class I and
CC class II antigen expression. The TSU sequence contains motifs related to
CC IFN signalling (GAS, ISRE and interleukin-4 response elements). The
CC nucleic acid can be used to regulate gene expression in a subject, e.g. a
CC human or a cell in vitro, specifically inhibiting MHC Class I or II,
CC ICAM-7, B7-1, B7-2, Pc gamma R, IL-2 or HIV gene expression. It can be
CC used to inhibit transplant rejection, or treat an autoimmune or
CC inflammatory disease or disorder. It can also be used to inhibit the
CC action of STAT1-6, or a cytokine.
XX
SQ Sequence 14 BP; 5 A; 2 C; 2 G; 5 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 14;
Best Local Similarity 92.9%; Pred. No. 4.3e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1016 TTTCAAGTGTAACT 1029
||||||||| ||||
Db 14 TTTCAAGTGAAACT 1

RESULT 702
AAZ32432
ID AAZ32432 standard; DNA; 14 BP.
XX
AC AAZ32432;
XX
DT 26-JAN-2000 (first entry)
XX
DE 8-mer minor groove binder conjugated oligonucleotide SEQ ID NO:37.
XX
KW M13mp19; MGB; minor groove binder; hybridisation; conjugate;
KW mismatch discrimination; diagnosis; detection; primer; probe;
KW forensic analysis; ss.
XX
OS Synthetic.
XX
PN WO9951621-A2.
XX
PD 14-OCT-1999.
XX
PF 05-APR-1999; 99WO-US07487.
XX
PR 03-APR-1998; 98US-0054832.
XX
PA (EPOC-) EPOCH PHARM INC.
XX
PI Hedgpeth J, Afonina IA, Kutyavin IV, Lukhtanov EA, Belousov ES;
PI Meyer RB;
XX
DR WPI; 1999-633727/54.
XX
PT Hybridization process using oligonucleotide primer or probe that is
PT conjugated to minor groove binder, e.g. for amplification reactions or
PT assays for mutations -
XX
PS Example 6; Page 68; 95pp; English.
XX
CC A method has been developed for hybridising two nucleic acids (NA) in
CC which at least one NA comprises a minor groove binder (MGB)-
CC oligonucleotide conjugate (A). MGB is a molecule of 150-2000 D that
CC binds in a non-intercalating manner to the minor groove of a double-
CC stranded NA. Hybridisation with (A), particularly where this is a probe
CC or primer, is used: in primer extension (amplification) reactions; to
CC identify single-nucleotide (nt) mismatches; in ligase reactions; in
CC sequencing; for analysis of gene expression and detection of mutations;
CC for detecting target nucleic acids (especially for diagnosis or
CC forensic analysis, e.g. to detect human immune deficiency virus or to
CC differentiate between its subtypes, including those that are resistant
CC to antiviral agents) and for cDNA synthesis. (A) forms hybrids with
CC complementary target sequences of very high stability, so even short
CC probes, e.g. 8-mers, are highly specific and efficient. (A) also improve
CC the discriminatory capacity of short oligonucleotides, providing better
CC detection of single-base mismatches, and the speed (more rapid annealing
CC to target) and versatility of assays are increased. Short primers are
CC easier, and less expensive, to produce. The present sequence represents
CC an 8-mer minor groove binder conjugated oligonucleotide used in an
CC example from the present invention.

CX
SQ Sequence 14 BP; 1 A; 1 C; 2 G; 10 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 14;
Best Local Similarity 92.9%; Pred. No. 4.3e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1564 TTTTTTTACTGTTT 1577
|||| |||||||||
Db 1 TTTTGTTACTGTTT 14

RESULT 703
AAD20794
ID AAD20794 standard; DNA; 14 BP.
XX
AC AAD20794;
XX
DT 04-JAN-2002 (first entry)
XX
DE PNA16/DNA oligo, used in sequencing and mass spectrometer detection.
XX
KW Mass spectrometry; diagnosis; genetic disease; chromosomal abnormality;
KW obesity; atherosclerosis; cancer; infection; viral; bacterial; fungal;
KW matrix-assisted laser desorption/ionisation; MALDI; HLA phenotyping;
KW heredity; mass spectrometry; ss.
XX
OS Unidentified.
XX
PN US6300076-B1.
XX
PD 09-OCT-2001.
XX
PF 31-JAN-2000; 2000US-0495444.
XX
PR 18-MAR-1996; 96US-0617256.
PR 17-MAR-1995; 95US-0406199.
XX
PA (SEQU-) SEQUENOM INC.
XX
PI Koester H;
XX
DR WPI; 2001-624663/72.
XX
PT Detecting target nucleic acid sequences in a biological sample
PT comprises amplifying NA molecules and analyzing using matrix-assisted
PT laser desorption/ionization time of flight mass spectrometry -
XX
PS Example 9; Column 35; 90pp; English.
XX
CC The invention relates to mass spectrometric processes useful for
CC detecting nucleic acids in a biological sample, comprises amplifying
CC nucleic acid molecules and analysing using matrix-assisted laser
CC desorption/ionisation (MALDI) time-of-flight (TOF) mass spectrometry.
CC The methods are used to diagnose (e.g., prenatally or postnatally) a
CC genetic disease or chromosomal abnormality; a predisposition to a disease
CC or condition (e.g., obesity, atherosclerosis, cancer), or infection by a
CC pathogenic organism (e.g., virus, bacteria, parasite or fungus); or to
CC provide information relating to identity, heredity, or compatibility
CC (e.g., HLA phenotyping). The present sequence is oligonucleotide,
CC PNA16/DNA used in solid state sequencing and mass spectrometer detection.
XX
SQ Sequence 14 BP; 4 A; 4 C; 2 G; 4 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 14;
Best Local Similarity 92.9%; Pred. No. 4.3e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 458 TCAACACTTCATGT 471
|||||||| |||||
Db 1 TCAACACTGCATGT 14

RESULT 704
AAS10742
ID AAS10742 standard; DNA; 14 BP.
XX
AC AAS10742;
XX
DT 24-OCT-2001 (first entry)
XX
DE Solid-state DNA sequencing primer PNA16/DNA.
XX
KW mass spectrometry; DNA fingerprint; obesity; atherosclerosis;
KW cancer; chromosomal abnormality; fungal; bacterial; protist; infection;
KW human leukocyte antigen; HLA genotyping; apolipoprotein E gene;
KW variable number of tandem repeat; VNTR; nucleic acid detection;
KW ss; sequencing primer.
XX
OS Synthetic.
XX
PN US6258538-B1.
XX
PD 10-JUL-2001.
XX
PF 06-APR-1999; 99US-0287679.
XX
PR 18-MAR-1996; 96US-0617256.
PR 06-APR-1999; 99US-0287679.
PR 17-MAR-1995; 95US-0406199.
XX
PA (SEQU-) SEQUENOM INC.
XX
PI Koester H, Little DP, Braun A;
XX
DR WPI; 2001-450360/48.
XX
PT Use of mass spectrometry for identifying or detecting target
PT nucleotide(s) present in nucleic acid molecule(s) -
XX
PS Example 9; Column 35; 95pp; English.
XX
CC The sequence represents solid-state DNA sequencing primer PNA16/DNA
CC used to demonstrate the method of the invention. This involves use of
CC mass spectrometry for identifying target nucleotide(s) present in nucleic
CC acid molecule(s), detecting a target nucleotide present in a biological
CC sample and determining whether a target nucleotide is present in nucleic
CC acid molecule(s). The method is used for identifying target nucleotide(s)
CC present in a DNA or RNA molecule(s), detecting a target nucleotide
CC present in a biological sample and determining whether a target
CC nucleotide present in nucleic acid molecule(s). The target nucleotides
CC are identified and detected in nucleic acid molecule(s) obtained from an
CC individual, and the target nucleotide(s) provides a DNA fingerprint or is
CC indicative of a genetic disease (such as obesity, atherosclerosis,
CC cancer), chromosomal abnormality (either prenatally or postnatally), a
CC genetic predisposition, a fungal, bacterial, or protist infection. The
CC presence of the target nucleotide also indicates the presence of a
CC mutation. They also provide information relating to identity, heredity,
CC or compatibility (human leukocyte antigen (HLA) genotyping). The method
CC is suitable for the detection of single point mutations or microlesions
CC of DNA and is also applicable in each disease gene or polymorphic region
CC in the genome e.g. variable number of tandem repeats (VNTR) or other
CC single nucleotide polymorphisms (e.g. apolipoprotein E gene). The
CC processes described above provide for increased accuracy and reliability
CC of nucleic acid detection by mass spectrometry, in addition the processes
CC allow for regress controls to prevent false positive or false negative
CC results.
XX
SQ Sequence 14 BP; 4 A; 4 C; 2 G; 4 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 14;
Best Local Similarity 92.9%; Pred. No. 4.3e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 458 TCAACACTTCATGT 471
|||||||| |||||

```
          1 TCAACACTGCATGT 14


SULT 705
D07293
   AAD07293 standard; cDNA; 14 BP.

   AAD07293;

   06-AUG-2001  (first entry)

   PNA16/DNA primer.

   Diagnosis; genetic disease; chromosomal abnormality; infection;
   heredity; mass spectrometry; primer; ss.

   Unidentified.

   US6221601-B1.

   24-APR-2001.

   02-NOV-1999;   99US-0431613.

   18-MAR-1996;   96US-0617256.
   17-MAR-1995;   95US-0406199.

   (SEQU-) SEQUENOM INC.

   Koester H,  Higgins GS,  Little DP,  Braun A;

   WPI; 2001-327240/34.

   Detecting a target nucleic acid sequence, useful for diagnosing a
   genetic disease, a chromosomal abnormality or an infection by a
   pathogen, or for determining identity or heredity, by employing mass
   spectrometry-based processes  -

   Example 9; Column 35; 94pp; English.

   The present invention relates to detecting a target nucleic acid
   sequence, useful for diagnosing a genetic disease, a chromosomal
   abnormality or an infection by a pathogen and for determining identity
   or heredity by employing mass spectrometry-based processes. The method
   involves hybridising a primer to a nucleic acid molecule comprising a
   target nucleic acid sequence, extending the primer using a polymerase
   to produce an extension product, selectively cleaving the 5' end of the
   primer from the extension product to produce a portion of the primer and
   a cleaved extension product and detecting the cleaved extension product
   by mass spectrometry. The present sequence is a primer used in solid
   state sequencing and mass spectrometer detection.
X
Q  Sequence 14 BP; 4 A; 4 C; 2 G; 4 T; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
 Best Local Similarity   92.9%;  Pred. No. 4.3e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y        458 TCAACACTTCATGT 471
             ||||||| |||||
b          1 TCAACACTGCATGT 14


ESULT 706
BK98758
D  ABK98758 standard; DNA; 14 BP.
X
C  ABK98758;
X
T  21-OCT-2002  (first entry)
X
E  Solid state sequencing reaction product #1.
X
KW  DNA diagnostic mass spectrometry; ds; genetic disease;
KW  chromosomal abnormality; viral infection; fungal infection;
KW  bacterial infection; protist infection; human leukocyte antigen;
KW  HLA phenotyping.
XX
OS  Synthetic.
XX
PN  US6277573-B1.
XX
PD  21-AUG-2001.
XX
PF  06-APR-1999;   99US-0287681.
XX
PR  18-MAR-1996;   96US-0617256.
PR  17-MAR-1995;   95US-0406199.
XX
PA  (SEQU-) SEQUENOM INC.
XX
PI  Koester H;
XX
DR  WPI; 2001-540404/60.
XX
PT  Detecting target nucleic acid sequence in sample, useful for diagnosing
PT  genetic disease or chromosomal abnormality, comprises amplifying
PT  nucleic acid containing target sequence and detecting amplified product
PT  by mass spectrometry  -
XX
PS  Example 9; Column 38; 92pp; English.
XX
CC  The invention relates to a method of detecting target nucleic acid
CC  sequences (S) in a biological sample, comprising performing on nucleic
CC  acid molecule(s) containing (S), a first polymerase chain reaction (PCR)
CC  to produce a first amplification product (P1), performing on P1 a second
CC  PCR to produce a second amplification product (P2), and detecting P2 by
CC  mass spectrometry, thus detecting the presence of (S) in the biological
CC  sample. The method is useful for detecting the presence of target nucleic
CC  acid sequence(s) in a biological sample obtained from an individual, and
CC  detecting (S) provides a DNA fingerprint or is indicative of a disease or
CC  condition such as genetic disease, chromosomal abnormality, genetic
CC  predisposition, viral infection, fungal infection, bacterial infection,
CC  and protist infection. The method is useful to diagnose (e.g., prenatally
CC  or postnatally) a genetic disease or chromosomal abnormality, a
CC  predisposition to a disease or condition (e.g., obesity, atherosclerosis,
CC  cancer), or infection by a pathogenic organism (e.g. virus, bacteria,
CC  parasitic or fungus), or to provide information relating to identity
CC  heredity, or compatibility (e.g. human leukocyte antigen (HLA)
CC  phenotyping). The method is fast, highly accurate and reliable.
CC  ABK98702-ABK98839 represent primers and DNA sequences used in examples
CC  which demonstrate the method of the invention.
XX
SQ  Sequence 14 BP; 4 A; 4 C; 2 G; 4 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
  Best Local Similarity   92.9%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        458 TCAACACTTCATGT 471
              ||||||| |||||
Db          1 TCAACACTGCATGT 14


RESULT 707
ABL55256/c
ID  ABL55256 standard; DNA; 14 BP.
XX
AC  ABL55256;
XX
DT  28-JUN-2002  (first entry)
XX
DE  Vector 1-8 Sleeping Beauty transposon 3' flanking sequence.
XX
KW  Transgenic mammal; transposon; non-integrated; signature site;
KW  transposase; disease model; drug screening; xenotransplant;
```

```
KW   Sleeping Beauty; flanking sequence; vector; ds.
XX
OS   Synthetic.
XX
PN   WO200213602-A1.
XX
PD   21-FEB-2002.
XX
PF   08-JUN-2001; 2001WO-JP04862.
XX
PR   16-AUG-2000; 2000JP-0247060.
XX
PA   (KANS-) KANSAI TECHNOLOGY LICENSING ORG CO LTD.
PA   (TAKE/) TAKEDA J.
XX
PI   Takeda J,  Horie K;
XX
DR   WPI; 2002-241819/29.
XX
PT   Transgenic non-human mammals containing non-integrated transposon
PT   and/or transposase gene, useful as disease models for e.g. clarifying
PT   gene function and screening drugs to regulate and treat the abnormal
PT   gene expression  -
XX
PS   Disclosure; Fig 5; 57pp; Japanese.
XX
CC   The invention relates to a transgenic non-human mammal comprising at
CC   least one non-integrated transposon and/or at least one transposon
CC   signature site and/or a transposase gene in an expressible state. The
CC   invention also relates to methods of producing such transgenic non-human
CC   mammals, and also encompasses the selection of transgenic animals of the
CC   invention as disease models. The transgenic non-human mammals are used
CC   for elucidating gene function, in screening drugs to treat disorders of
CC   gene expression and protein function that are associated with disease,
CC   and as a source of organs for xenotransplantation into humans (e.g.,
CC   nerve cells, heart, lung, liver, spleen, kidney, cornea and skin).
CC   Sequences ABL55255-ABL55256 represent sequences which flank a
CC   Sleeping Beauty (SB) transposon in a vector (designated 1-8) used
CC   in the invention, and sequence ABL55257 represents the sequence
CC   that results after transposition of SB.
XX
SQ   Sequence 14 BP; 5 A; 2 C; 2 G; 5 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
  Best Local Similarity   92.9%;  Pred. No. 4.3e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        798 TTGCCATAAAGTCA 811
              ||||||||||||| |
Db         14 TTGCCATAAAGTTA 1


RESULT 708
ABZ21280
ID   ABZ21280 standard; RNA; 14 BP.
XX
AC   ABZ21280;
XX
DT   16-APR-2003  (first entry)
XX
DE   FIXa aptamer oligonucleotide modulator, AS 3NT-3M, SEQ ID 39.
XX
KW   Immunosuppressive; aptamer; infection; autoimmunity; tumour;
KW   inflammatory proliferative disease; hypoglycaemia; human;
KW   coagulation Factor IXa; FIXa; ss.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   modified_base    1..14
FT                    /*tag=  a
FT                    /mod_base= "OTHER"
FT                    /note= "All nucleotides are 2'Omethyl oligonucleotides"
XX
PN   WO200296926-A1.
XX
PD   05-DEC-2002.
XX
PF   28-MAY-2002; 2002WO-US16555.
XX
PR   25-MAY-2001; 2001US-293231P.
PR   07-NOV-2001; 2001US-331037P.
XX
PA   (UYDU-) UNIV DUKE.
XX
PI   Sullenger BA,  Rusconi C;
XX
DR   WPI; 2003-140438/13.
XX
PT   Altering affinity of nucleic acid ligands for target molecules in a
PT   patient or reversing binding of labeled ligands to target tissues, by
PT   administering (to a patient receiving the ligand) a modulator that
PT   binds to ligand -
XX
PS   Claim 50; Page 74; 111pp; English.
XX
CC   The present invention relates to a method for altering the affinity of a
CC   nucleic acid ligand (e.g. an aptamer) for a target molecule in a patient
CC   or in vitro, or reversing the binding of the labelled ligand to a target
CC   tissue. The method comprises administering a modulator that binds to the
CC   ligand to a patient receiving the ligand, or contacting the ligand with
CC   the modulator under conditions such that the modulator binds to the
CC   ligand, and thus alters the affinity of the ligand for the target
CC   molecule. The method is useful for treating a number of disorders e.g.
CC   infection, autoimmunity, tumours, inflammatory proliferative diseases and
CC   hypoglycaemia. The present sequence is an oligonucleotide modulator,
CC   which targets the FIXa aptamers 9.3t or 9.3t-3NT. The FIXa aptamers bind
CC   to human coagulation Factor IXa and were used to illustrate the method of
CC   the invention. This oligonucleotide was found to be effective at
CC   reversing FIXa aptamer's anticoagulation activity in human plasma in
CC   vitro.
XX
SQ   Sequence 14 BP; 5 A; 2 C; 6 G; 1 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
  Best Local Similarity   85.7%;  Pred. No. 4.3e+02;
  Matches   12;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        971 GACATGTGGAAGCA 984
              ||||:| |||||||
Db          1 GACAUGGGGAAGCA 14


RESULT 709
AAQ55455
ID   AAQ55455 standard; DNA; 15 BP.
XX
AC   AAQ55455;
XX
DT   25-MAR-2003  (updated)
DT   19-JUL-1994  (first entry)
XX
DE   Detection primer for cystic fibrosis mutation.
XX
KW   Cystic fibrosis; CF; mutation; detection; primer extension; typing;
KW   genotype identification; biotinylated; ss.
XX
OS   Synthetic.
XX
PN   WO9401447-A1.
XX
PD   20-JAN-1994.
XX
PF   01-JUL-1993;   93WO-US06364.
XX
PR   02-JUL-1992;   92IL-0102382.
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RL   27-JUL-1992;   92US-0919872.
RC
RA   (ERIP-) ERIPHYLE BV.
RA   (FRIE/) FRIEDMAN M M.
RC
RT   Eyal N;
RC
RL   WPI; 1994-034981/04.
RC
RT   Determining identity of nucleotide base - by using primer
RT   extension process, useful for typing of samples and genotype
RT   identification
RC
RL   Example A; Page 24; 42pp; English.
RC
RT   The primers (AAQ55452-62) are use to detect mutations within the
RT   cystic fibrosis gene. The primers are designed to be complementary
RT   to eight of the most common mutations within the CF gene. Detection
RT   is carried out by the incorporation of a labelled dideoxynucleotide.
RT   Individuals carrying the mutation incorporate a different base as
RT   opposed to normal individuals.
RT   This primer detects the 551 mutation site by the
RT   incorporation of ddTTP as opposed to ddCTP.
RT   (Updated on 25-MAR-2003 to correct PN field.)
RC
RL   Sequence 15 BP; 2 A; 3 C; 3 G; 7 T; 0 other;

Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1438 TTCTTGCTGGTTGA 1451
              ||||||| |||||
Db          2 TTCTTGCTCGTTGA 15


RESULT 710
AAT56342
ID   AAT56342 standard; RNA; 15 BP.
XX
AC   AAT56342;
XX
DT   25-MAR-2003  (updated)
DT   14-MAY-1997  (first entry)
XX
DE   Mouse TNF-a hammerhead ribozyme target sequence (nt position 1315).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Mus musculus.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
PR   28-NOV-1994;   94US-0345516.
PR   16-DEC-1994;   94US-0357577.
PR   23-DEC-1994;   94US-0363233.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
PI   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them  -
PT   for use in inhibiting disease related genes
XX
PS   Claim 2; Page 252; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
CC   mRNA at the nucleotide base position indicated in the DE line.
CC   Regions of the mRNA that do not form secondary folding
CC   structures and that contain potential hammerhead and hairpin
CC   ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease
CC   resistance. The ribozymes are designed to cleave the target
CC   sequences and thereby inhibit TNF-alpha expression, making them
CC   potentially useful for treating rheumatoid arthritis, septic shock
CC   and other inflammatory disorders including psoriasis, as well as
CC   for treatment of AIDS.
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 15 BP; 5 A; 0 C; 0 G; 10 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 4.6e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1043 ATTATTTATGTATT 1056
              |::|:::|: :|::
Db          1 AUUAUUUAUUUAUU 14


RESULT 711
AAT54316
ID   AAT54316 standard; RNA; 15 BP.
XX
AC   AAT54316;
XX
DT   25-MAR-2003  (updated)
DT   24-MAR-1997  (first entry)
XX
DE   Human IL-5 hammerhead ribozyme target sequence (nt. position 752).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
```

```
CW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
CW   intercellular adhesion molecule; rel A; tumour necrosis factor;
CW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
CW   translocation; chronic myelogenous leukaemia; CML; cancer;
CW   Philadelphia chromosome; inflammation; autoimmune disease;
CW   atherosclerosis; myocardial infarction; stroke; restenosis;
CW   transplant rejection; rheumatoid arthritis; psoriasis;
CW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
CW   human immunodeficiency virus; acquired immune deficiency syndrome;
CW   AIDS; ss.
CX
OS   Homo sapiens.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
PR   28-NOV-1994;   94US-0345516.
PR   16-DEC-1994;   94US-0357577.
PR   23-DEC-1994;   94US-0363233.
CX
PA   (RIBO-) RIBOZYME PHARM INC.
CX
PI   Stinchcomb DT, Chowrira B, Direnzo A, Draper KG, Dudycz LW;
PI   Grimm S, Karpeisky A, Kisich K, Matulic-adamic J, Mcswiggen JA;
PI   Modak A, Pavco P, Beigleman L, Sullivan SM, Sweedler D;
PI   Thompson JD, Tracz D, Usman N, Wincott FE, Woolf T;
CX
DR   WPI; 1995-351090/45.
CX
PT   Ribozymes having modified bases and methods for producing them -
PT   for use in inhibiting disease related genes
CX
PS   Claim 2; Page 215; 407pp; English.
CX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves interleukin-5
CC   (IL-5) mRNA at the nucleotide base position indicated in the DE line.
CC   Regions of the mRNA that do not form secondary folding
CC   structures and that contain potential hammerhead and hairpin
CC   ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease
CC   resistance. The ribozymes cleave the IL-5 target sequences and
CC   thereby inhibit IL-5 expression, making them useful for treating
CC   chronic asthma, e.g. by inhibiting the synthesis of IL-5 in
CC   lymphocytes and preventing the recruitment and activation of
CC   eosinophils. The ribozymes can also be used to treat eosinophilia
CC   (related to parasitic infection or with pulmonary infiltration) and
CC   L-tryptophan-associated eosinophilia-myalgia syndrome.
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 15 BP; 7 A; 0 C; 3 G; 5 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   71.4%;  Pred. No. 4.6e+02;
  Matches   10;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1081 AAGAATTTGGAAAA 1094
                ||||||:::|| |||
Db          2 AAGAAUUUGGUAAA 15


RESULT 712
AAT54318
ID   AAT54318 standard; RNA; 15 BP.
XX
AC   AAT54318;
XX
DT   25-MAR-2003  (updated)
DT   24-MAR-1997  (first entry)
XX
DE   Human IL-5 hammerhead ribozyme target sequence (nt. position 753).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
PR   28-NOV-1994;   94US-0345516.
PR   16-DEC-1994;   94US-0357577.
PR   23-DEC-1994;   94US-0363233.
XX
```

```
A   (RIBO-) RIBOZYME PHARM INC.
C
I   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
I   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
I   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
I   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
C
R   WPI; 1995-351090/45.
C
P   Ribozymes having modified bases and methods for producing them  -
P   for use in inhibiting disease related genes
C
S   Claim 2; Page 215; 407pp; English.
C
C   The present sequence represents a preferred target sequence for an
C   enzymatic nucleic acid (i.e. a ribozyme) which cleaves interleukin-5
C   (IL-5) mRNA at the nucleotide base position indicated in the DE line.
C   Regions of the mRNA that do not form secondary folding
C   structures and that contain potential hammerhead and hairpin
C   ribozyme cleavage sites were identified by computer analysis.
C   Ribozymes directed against these mRNA sequences were designed and
C   synthesised with modifications that improve their nuclease
C   resistance. The ribozymes cleave the IL-5 target sequences and
C   thereby inhibit IL-5 expression, making them useful for treating
C   chronic asthma, e.g. by inhibiting the synthesis of IL-5 in
C   lymphocytes and preventing the recruitment and activation of
C   eosinophils. The ribozymes can also be used to treat eosinophilia
C   (related to parasitic infection or with pulmonary infiltration) and
C   L-tryptophan-associated eosinophilia-myalgia syndrome.
C   (Updated on 25-MAR-2003 to correct PI field.)
X
Q   Sequence 15 BP; 7 A; 0 C; 3 G; 5 U; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
 Best Local Similarity   71.4%;  Pred. No. 4.6e+02;
 Matches   10;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

y       1081 AAGAATTTGGAAAA 1094
             ||||:::|| |||
b          1 AAGAAUUUGGUAAA 14


ESULT 713
AT55821
D   AAT55821 standard; RNA; 15 BP.
X
C   AAT55821;
X
T   25-MAR-2003  (updated)
T   25-MAR-1997  (first entry)
X
E   Human TNF-alpha hammerhead ribozyme target sequence (nt position 1276).
X
W   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
W   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
W   intercellular adhesion molecule; rel A; tumour necrosis factor;
W   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
W   translocation; chronic myelogenous leukaemia; CML; cancer;
W   Philadelphia chromosome; inflammation; autoimmune disease;
W   atherosclerosis; myocardial infarction; stroke; restenosis;
W   transplant rejection; rheumatoid arthritis; psoriasis;
W   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
W   human immunodeficiency virus; acquired immune deficiency syndrome;
W   AIDS; ss.
X
S   Homo sapiens.
X
N   WO9523225-A2.
X
D   31-AUG-1995.
X
F   23-FEB-1995;   95WO-IB00156.
X
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PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
PR   28-NOV-1994;   94US-0345516.
PR   16-DEC-1994;   94US-0357577.
PR   23-DEC-1994;   94US-0363233.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
PI   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them  -
PT   for use in inhibiting disease related genes
XX
PS   Claim 2; Page 243; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
CC   mRNA at the nucleotide base position indicated in the DE line.
CC   Regions of the mRNA that do not form secondary folding
CC   structures and that contain potential hammerhead and hairpin
CC   ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease
CC   resistance. The ribozymes are designed to cleave the target
CC   sequences and thereby inhibit TNF-alpha expression, making them
CC   potentially useful for treating rheumatoid arthritis, septic shock
CC   and other inflammatory disorders including psoriasis, as well as
CC   for treatment of AIDS.
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 15 BP; 4 A; 1 C; 0 G; 10 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 4.6e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1045 TATTTATGTATTTA 1058
              :|:::|: :|:::|
Db          1 UAUUUAUUUAUUUA 14


RESULT 714
AAT55803
ID   AAT55803 standard; RNA; 15 BP.
XX
AC   AAT55803;
XX
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```
DT   25-MAR-2003  (updated)
DT   25-MAR-1997  (first entry)
XX
DE   Human TNF-alpha hammerhead ribozyme target sequence (nt position 1263).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
PR   28-NOV-1994;   94US-0345516.
PR   16-DEC-1994;   94US-0357577.
PR   23-DEC-1994;   94US-0363233.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
PI   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them  -
PT   for use in inhibiting disease related genes
XX
PS   Claim 2; Page 243; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
CC   mRNA at the nucleotide base position indicated in the DE line.
CC   Regions of the mRNA that do not form secondary folding
CC   structures and that contain potential hammerhead and hairpin
CC   ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease
CC   resistance. The ribozymes are designed to cleave the target
CC   sequences and thereby inhibit TNF-alpha expression, making them
CC   potentially useful for treating rheumatoid arthritis, septic shock
CC   and other inflammatory disorders including psoriasis, as well as
CC   for treatment of AIDS.
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 15 BP; 5 A; 0 C; 0 G; 10 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 4.6e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1043 ATTATTTATGTATT 1056
              |::|:::|: :|::
Db          1 AUUAUUUAUUUAUU 14


RESULT 715
AAT52043
ID   AAT52043 standard; RNA; 15 BP.
XX
AC   AAT52043;
XX
DT   25-MAR-2003  (updated)
DT   19-MAR-1997  (first entry)
XX
DE   Human ICAM hammerhead ribozyme target sequence (nt. position 2158).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
```

R 28-NOV-1994; 94US-0345516.
R 16-DEC-1994; 94US-0357577.
R 23-DEC-1994; 94US-0363233.
X
A (RIBO-) RIBOZYME PHARM INC.
C
I Stinchcomb DT, Chowrira B, Direnzo A, Draper KG, Dudycz LW;
I Grimm S, Karpeisky A, Kisich K, Matulic-adamic J, Mcswiggen JA;
I Modak A, Pavco P, Beigleman L, Sullivan SM, Sweedler D;
I Thompson JD, Tracz D, Usman N, Wincott FE, Woolf T;
C
W WPI; 1995-351090/45.
C
T Ribozymes having modified bases and methods for producing them -
T for use in inhibiting disease related genes
C
C Claim 2; Page 174; 407pp; English.

The present sequence represents a preferred target sequence for an enzymatic nucleic acid (i.e. a ribozyme) which cleaves ICAM-1 mRNA at the nucleotide base position indicated in the DE line. Regions of the mRNA that do not form secondary folding structures and that contain potential hammerhead and hairpin ribozyme cleavage sites were identified by computer analysis. Ribozymes directed against these mRNA sequences were designed and synthesised with modifications that improve their nuclease resistance. The ribozymes cleave the ICAM-1 target sequences and thereby inhibit ICAM-1 expression, making them useful for reducing transplant rejection and alleviating symptoms in patients with rheumatoid arthritis, asthma and other inflammatory disorders. (Updated on 25-MAR-2003 to correct PI field.)

S Sequence 15 BP; 4 A; 1 C; 1 G; 9 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 35.7%; Pred. No. 4.6e+02;
Matches 5; Conservative 8; Mismatches 1; Indels 0; Gaps 0;

1049 TATGTATTTATTTA 1062
:|:|:|:::|:: |
1 UAUGUAUUUAUUCA 14

SULT 716
AT56823/c
AAT56823 standard; RNA; 15 BP.

AAT56823;

25-MAR-2003 (updated)
04-APR-1997 (first entry)

RSV 1B hammerhead ribozyme target sequence (nt. position 383).

Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition; gene expression; downregulation; interleukin-5; IL-5; ICAM-1; intercellular adhesion molecule; rel A; tumour necrosis factor; TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene; translocation; chronic myelogenous leukaemia; CML; cancer; Philadelphia chromosome; inflammation; autoimmune disease; atherosclerosis; myocardial infarction; stroke; restenosis; transplant rejection; rheumatoid arthritis; psoriasis; myocardial ischaemia; Kawasaki disease; septic shock; HIV; human immunodeficiency virus; acquired immune deficiency syndrome; AIDS; ss.

Respiratory Syncytial Virus.

WO9523225-A2.

31-AUG-1995.

23-FEB-1995; 95WO-IB00156.

XX
PR 30-JAN-1995; 95US-0380734.
PR 23-FEB-1994; 94US-0201109.
PR 29-MAR-1994; 94US-0218934.
PR 04-APR-1994; 94US-0222795.
PR 07-APR-1994; 94US-0224483.
PR 15-APR-1994; 94US-0227958.
PR 15-APR-1994; 94US-0228041.
PR 18-MAY-1994; 94US-0245736.
PR 06-JUL-1994; 94US-0271280.
PR 15-AUG-1994; 94US-0291932.
PR 16-AUG-1994; 94US-0291433.
PR 17-AUG-1994; 94US-0292620.
PR 19-AUG-1994; 94US-0293520.
PR 02-SEP-1994; 94US-0300000.
PR 08-SEP-1994; 94US-0303039.
PR 23-SEP-1994; 94US-0311486.
PR 23-SEP-1994; 94US-0311749.
PR 28-SEP-1994; 94US-0314397.
PR 03-OCT-1994; 94US-0316771.
PR 07-OCT-1994; 94US-0319492.
PR 11-OCT-1994; 94US-0321993.
PR 04-NOV-1994; 94US-0334847.
PR 10-NOV-1994; 94US-0337608.
PR 28-NOV-1994; 94US-0345516.
PR 16-DEC-1994; 94US-0357577.
PR 23-DEC-1994; 94US-0363233.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Stinchcomb DT, Chowrira B, Direnzo A, Draper KG, Dudycz LW;
PI Grimm S, Karpeisky A, Kisich K, Matulic-adamic J, Mcswiggen JA;
PI Modak A, Pavco P, Beigleman L, Sullivan SM, Sweedler D;
PI Thompson JD, Tracz D, Usman N, Wincott FE, Woolf T;
XX
DR WPI; 1995-351090/45.
XX
PT Ribozymes having modified bases and methods for producing them -
PT for use in inhibiting disease related genes
XX
PS Claim 2; Page 265; 407pp; English.
XX
CC The present sequence represents a preferred target sequence for an
CC enzymatic nucleic acid (i.e. a ribozyme) which cleaves mRNA coding
CC for a protein of respiratory syncytial virus (RSV) at the
CC nucleotide base position indicated in the DE line. Regions of
CC the mRNA that do not form secondary folding structures and that
CC contain potential hammerhead and hairpin ribozyme cleavage sites
CC were identified by computer analysis. Ribozymes directed against
CC these mRNA sequences were designed and synthesised with modifications
CC that improve their nuclease resistance. The ribozymes cleave the
CC target sequences and can be used for treatment and diagnosis of
CC RSV infection.
CC (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ Sequence 15 BP; 7 A; 3 C; 1 G; 4 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 4.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1453 ACTTGTTTATTATG 1466
|||||| |||||||
Db 15 ACTTGTATATTATG 2

RESULT 717
AAT52398
ID AAT52398 standard; RNA; 15 BP.
XX
AC AAT52398;
XX
DT 25-MAR-2003 (updated)

```
T   09-APR-1997  (first entry)
X
E   Mouse ICAM hammerhead ribozyme target sequence (nt. position 2156).
X
W   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
W   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
W   intercellular adhesion molecule; rel A; tumour necrosis factor;
W   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
W   translocation; chronic myelogenous leukaemia; CML; cancer;
W   Philadelphia chromosome; inflammation; autoimmune disease;
W   atherosclerosis; myocardial infarction; stroke; restenosis;
W   transplant rejection; rheumatoid arthritis; psoriasis;
W   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
W   human immunodeficiency virus; acquired immune deficiency syndrome;
W   AIDS; ss.
X
S   Mus musculus.
X
N   WO9523225-A2.
X
D   31-AUG-1995.
X
F   23-FEB-1995;   95WO-IB00156.
X
R   30-JAN-1995;   95US-0380734.
R   23-FEB-1994;   94US-0201109.
R   29-MAR-1994;   94US-0218934.
R   04-APR-1994;   94US-0222795.
R   07-APR-1994;   94US-0224483.
R   15-APR-1994;   94US-0227958.
R   15-APR-1994;   94US-0228041.
R   18-MAY-1994;   94US-0245736.
R   06-JUL-1994;   94US-0271280.
R   15-AUG-1994;   94US-0291932.
R   16-AUG-1994;   94US-0291433.
R   17-AUG-1994;   94US-0292620.
R   19-AUG-1994;   94US-0293520.
R   02-SEP-1994;   94US-0300000.
R   08-SEP-1994;   94US-0303039.
R   23-SEP-1994;   94US-0311486.
R   23-SEP-1994;   94US-0311749.
R   28-SEP-1994;   94US-0314397.
R   03-OCT-1994;   94US-0316771.
R   07-OCT-1994;   94US-0319492.
R   11-OCT-1994;   94US-0321993.
R   04-NOV-1994;   94US-0334847.
R   10-NOV-1994;   94US-0337608.
R   28-NOV-1994;   94US-0345516.
R   16-DEC-1994;   94US-0357577.
R   23-DEC-1994;   94US-0363233.
X
A   (RIBO-) RIBOZYME PHARM INC.
X
I   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
I   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
I   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
I   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
X
R   WPI; 1995-351090/45.
X
T   Ribozymes having modified bases and methods for producing them -
T   for use in inhibiting disease related genes
X
S   Claim 2; Page 179; 407pp; English.
X
C   The present sequence represents a preferred target sequence for
C   an enzymatic nucleic acid (i.e. a ribozyme) which cleaves ICAM-1
C   mRNA at the nucleotide base position indicated in the DE line.
C   Regions of the mRNA that do not form secondary folding
C   structures and that contain potential hammerhead and hairpin
C   ribozyme cleavage sites were identified by computer analysis.
C   Ribozymes directed against these mRNA sequences were designed and
C   synthesised with modifications that improve their nuclease
C   resistance. The ribozymes cleave the ICAM-1 target sequences and
C   thereby inhibit ICAM-1 expression, making them useful for reducing
C   transplant rejection and alleviating symptoms in patients with
C   rheumatoid arthritis, asthma and other inflammatory disorders.
C   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 15 BP; 4 A; 0 C; 2 G; 9 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 4.6e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATT 1060
              :: |:|:|:::|::
Db          1 UUGAUGUAUUUAUU 14


RESULT 718
AAT52516
ID   AAT52516 standard; RNA; 15 BP.
XX
AC   AAT52516;
XX
DT   25-MAR-2003  (updated)
DT   10-APR-1997  (first entry)
XX
DE   Mouse ICAM hammerhead ribozyme target sequence (nt. position 2906).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Mus musculus.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
PR   28-NOV-1994;   94US-0345516.
PR   16-DEC-1994;   94US-0357577.
```

23-DEC-1994; 94US-0363233.

(RIBO-) RIBOZYME PHARM INC.

Stinchcomb DT, Chowrira B, Direnzo A, Draper KG, Dudycz LW; Grimm S, Karpeisky A, Kisich K, Matulic-adamic J, Mcswiggen JA; Modak A, Pavco P, Beigleman L, Sullivan SM, Sweedler D; Thompson JD, Tracz D, Usman N, Wincott FE, Woolf T;

WPI; 1995-351090/45.

Ribozymes having modified bases and methods for producing them - for use in inhibiting disease related genes

Claim 2; Page 180; 407pp; English.

The present sequence represents a preferred target sequence for an enzymatic nucleic acid (i.e. a ribozyme) which cleaves ICAM-1 mRNA at the nucleotide base position indicated in the DE line. Regions of the mRNA that do not form secondary folding structures and that contain potential hammerhead and hairpin ribozyme cleavage sites were identified by computer analysis. Ribozymes directed against these mRNA sequences were designed and synthesised with modifications that improve their nuclease resistance. The ribozymes cleave the ICAM-1 target sequences and thereby inhibit ICAM-1 expression, making them useful for reducing transplant rejection and alleviating symptoms in patients with rheumatoid arthritis, asthma and other inflammatory disorders. (Updated on 25-MAR-2003 to correct PI field.)

Sequence 15 BP; 4 A; 0 C; 2 G; 9 U; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
Best Local Similarity   28.6%;  Pred. No. 4.6e+02;
Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

       1047 TTTATGTATTTATT 1060
            :: |:|:|:::|::
          1 UUGAUGUAUUUAUU 14
```

SULT 719
X66566/c
AAX66566 standard; RNA; 15 BP.

AAX66566;

20-JUL-1999 (first entry)

Human CD40 hammerhead ribozyme target SEQ ID NO:3198.

Arthritic condition; graft tolerance; immune response; target; cleavage; hammerhead ribozyme; hairpin ribozyme; human; rabbit; mouse; collagenase; stromelysin; synovial membrane; joint; arthritis; osteoarthritis; rheumatoid arthritis; autoimmune disease; allergy; inflammation; diagnosis; ss.

Homo sapiens.

WO9618736-A2.

20-JUN-1996.

22-NOV-1995; 95WO-US15516.

05-OCT-1995; 95US-0541365.
13-DEC-1994; 94US-0354920.
23-DEC-1994; 94US-0363253.
23-DEC-1994; 94US-0363254.
17-FEB-1995; 95US-0390850.
20-APR-1995; 95US-0426124.
02-MAY-1995; 95US-0432874.
04-MAY-1995; 95US-0434509.
07-JUL-1995; 95US-0000951.
07-JUL-1995; 95US-0000974.
07-AUG-1995; 95US-0512861.

(RIBO-) RIBOZYME PHARM INC.

Draper K, Gustofson J, McSwiggen J, Pavco P, Stinchcomb DT; Beigelman L, Karpeisky A, Modak A, Usman N, Burgin A; Matulic-Adamic J, Jarvis T, Thompson JD, Wincott F;

WPI; 1996-300653/30.

Enzymatic nucleic acid molecules having a hammer-head motif - used for the treatment of arthritis, induction of graft tolerance or treatment of auto-immune diseases

Claim 10; Page 204; 307pp; English.

The present invention describes a novel enzymatic nucleic acid (ENA) having a hammerhead motif (HM) comprising: (i) at least 5 ribose residues; (ii) a 2'-C-allyl modification at position 4 of the ENA; (iii) at least ten 2'-O-methyl modifications; and (iv) a 3'-end modification. The ENA's can inhibit collagenase and stromelysin production in the synovial membrane of joints for the treatment or prevention of arthritis, particularly osteoarthritis or rheumatoid arthritis. The ENA's can also be used to treat antigen presenting cells of a donor to induce tolerance in a recipient to an alloantigen of a donor. They can also be used for enhancing graft tolerance or for treating autoimmune disease, and for treating allergies and other inflammatory conditions. The ENA's can also be used in diagnosis. Ribozyme therapy impacts on the expression of stromelysin without introducing the non-specific effects upon gene expression which accompany treatment with retinoids and dexamethasone. The concentration of ribozyme required to affect a therapeutic treatment is lower than that required of antisense molecules, and is highly specific. The present sequence is used in the exemplification of the present invention.

Sequence 15 BP; 8 A; 3 C; 1 G; 3 U; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1456 TGTTTATTATGTAC 1469
              ||||||||| ||||
Db         15 TGTTTATTAGGTAC 2
```

RESULT 720
AAX65399/c
ID AAX65399 standard; RNA; 15 BP.
AC AAX65399;
DT 20-JUL-1999 (first entry)
DE Mouse B7-1 hammerhead ribozyme target SEQ ID NO:2031.
KW Arthritic condition; graft tolerance; immune response; target; cleavage; hammerhead ribozyme; hairpin ribozyme; human; rabbit; mouse; collagenase; stromelysin; synovial membrane; joint; arthritis; osteoarthritis; rheumatoid arthritis; autoimmune disease; allergy; inflammation; diagnosis; ss.
OS Mus sp.
PN WO9618736-A2.
PD 20-JUN-1996.
PF 22-NOV-1995; 95WO-US15516.
PR 05-OCT-1995; 95US-0541365.

```
?R   13-DEC-1994;   94US-0354920.
?R   23-DEC-1994;   94US-0363253.
?R   23-DEC-1994;   94US-0363254.
?R   17-FEB-1995;   95US-0390850.
?R   20-APR-1995;   95US-0426124.
?R   02-MAY-1995;   95US-0432874.
?R   04-MAY-1995;   95US-0434509.
?R   07-JUL-1995;   95US-0000951.
?R   07-JUL-1995;   95US-0000974.
?R   07-AUG-1995;   95US-0512861.
CX
?A   (RIBO-) RIBOZYME PHARM INC.
CX
?I   Draper K, Gustofson J, McSwiggen J, Pavco P, Stinchcomb DT;
?I   Beigelman L, Karpeisky A, Modak A, Usman N, Burgin A;
?I   Matulic-Adamic J, Jarvis T, Thompson JD, Wincott F;
CX
?R   WPI; 1996-300653/30.
CX
?T   Enzymatic nucleic acid molecules having a hammer-head motif - used
?T   for the treatment of arthritis, induction of graft tolerance or
?T   treatment of auto-immune diseases
CX
?S   Claim 10; Page 180; 307pp; English.
CX
?C   The present invention describes a novel enzymatic nucleic acid (ENA)
?C   having a hammerhead motif (HM) comprising: (i) at least 5 ribose
?C   residues; (ii) a 2'-C-allyl modification at position 4 of the ENA; (iii)
?C   at least ten 2'-O-methyl modifications; and (iv) a 3'-end modification.
?C   The ENA's can inhibit collagenase and stromelysin production in the
?C   synovial membrane of joints for the treatment or prevention of arthritis,
?C   particularly osteoarthritis or rheumatoid arthritis. The ENA's can also
?C   be used to treat antigen presenting cells of a donor to induce tolerance
?C   in a recipient to an alloantigen of a donor. They can also be used for
?C   enhancing graft tolerance or for treating autoimmune disease, and for
?C   treating allergies and other inflammatory conditions. The ENA's can also
?C   be used in diagnosis. Ribozyme therapy impacts on the expression of
?C   stromelysin without introducing the non-specific effects upon gene
?C   expression which accompany treatment with retinoids and dexamethasone.
?C   The concentration of ribozyme required to affect a therapeutic treatment
?C   is lower than that required of antisense molecules, and is highly
?C   specific. The present sequence is used in the exemplification of the
?C   present invention.
CX
?Q   Sequence 15 BP; 9 A; 0 C; 0 G; 6 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

?y       1038 TATTTATTATTTAT 1051
              ||||||  |||||||
?b         15 TATTTAATATTTAT 2


ESULT 721
AX75738
D   AAX75738 standard; RNA; 15 BP.
X
C   AAX75738;
X
T   28-JUL-1999  (first entry)
X
E   Human flt-1 and KDR hammerhead ribozyme target site #72.
X
W   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
W   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
W   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
W   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
W   foetal liver kinase 1; ss.
X
S   Homo sapiens.
X
PN   WO9715662-A2.
XX
PD   01-MAY-1997.
XX
PF   25-OCT-1996;   96WO-US17480.
XX
PR   11-JAN-1996;   96US-0584040.
PR   26-OCT-1995;   95US-0005974.
XX
PA   (CHIR ) CHIRON CORP.
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Escobedo J, McSwiggen J, Pavco P, Stinchcomb D;
XX
DR   WPI; 1997-259017/23.
XX
PT   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
PT   mRNA stability - useful for treating e.g. tumour angiogenesis,
PT   psoriasis, rheumatoid arthritis, etc., in a human patient
XX
PS   Example 9; Page 192; 218pp; English.
XX
CC   The present invention describes nucleic acid molecules which modulate
CC   the synthesis, expression and/or stability of a mRNA encoding 1 or more
CC   receptors of vascular endothelial growth factor (VEGF). A patient
CC   (preferably human) having a condition associated with the level of the
CC   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
CC   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
CC   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
CC   be treated by administering the nucleic acid molecule or the expression
CC   vector to the patient. AAX67275 to AAX75752 represent specific examples
CC   of nucleic acid molecules from the present invention.
XX
SQ   Sequence 15 BP; 4 A; 2 C; 2 G; 7 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   50.0%;  Pred. No. 4.6e+02;
  Matches    7;  Conservative    6;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1457 GTTTATTATGTACA 1470
              |: :|::|:|:|||
Db          1 GUCUAUUAUGUACA 14


RESULT 722
AAV06916
ID   AAV06916 standard; DNA; 15 BP.
XX
AC   AAV06916;
XX
DT   03-JUL-1998  (first entry)
XX
DE   Probe PP15-TGT-TO for analysis on nucleic acids.
XX
KW   Nucleic acid analysis; probe; sequence recognising element; SRE;
KW   reporter group; hybridisation; detection; diagnosis; PPA;
KW   peptide-nucleic acid; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1
FT                   /*tag=  a
FT                   /note= "Adenine-Lys-Lys"
FT   modified_base   14
FT                   /*tag=  b
FT                   /note= "Thymine attached to reporter group"
XX
PN   WO9745539-A1.
XX
PD   04-DEC-1997.
XX
PF   30-MAY-1997;   97WO-SE00953.
```

31-MAY-1996; 96SE-0002183.

(KUBI/) KUBISTA M.
(SVAN/) SVANVIK N.

Kubista M, Svanvik N;

WPI; 1998-032646/03.

Probe for target nucleic acid sequences - includes a reporter group whose signal properties are considerably altered when the probe binds to nucleic acid

Example 6; Page 21; 58pp; English.

This sequence is shown in the specification. The invention relates to a probe for target nucleic acid sequences, which comprises a sequence recognising element (SRE) covalently bound to a reporter group (RG) whose signal properties are considerably altered when it binds to nucleic acid (NA). The probe (i) at least in its part nearest to the RG, has a structure such that any intramolecular interaction between the SRE and RG is suppressed, or such that this intramolecular interaction minimally affects the signal properties, and/or (ii) upon binding to target sequences, creates a structure that increases the signal alteration caused by the binding of the RG to NA. Also claimed are three specific groups of asymmetric cyanine compounds which can be used as reporter groups in the above probe. The probes may be used for hybridisation to nucleic acids. They may be used for identification of specific genes, gene segments, RNA molecules and other nucleic acids. They may be used in clinical procedures, analysis of blood or urine, food technology, agriculture and biological research. They may be used, e.g. for identification of infectious diagnosis, or for testing the outcome of cloning procedures. The probes can be used in-vivo without damaging tissues or cells. They allow real time detection and can be used over a large temperature range.

Sequence 15 BP; 5 A; 4 C; 2 G; 4 T; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

       458 TCAACACTTCATGT 471
           ||||||| |||||
         2 TCAACACTGCATGT 15
```

SULT 723
X26372/c
AAX26372 standard; cDNA; 15 BP.

AAX26372;

26-MAY-1999 (first entry)

Antisense oligonucleotide directed against synthesis of duck HBV.

Antisense oligonucleotide; MuLV; membrane permeability; stability; DNA/RNA hybrid; ss.

Synthetic.
Duck hepatitis B virus.

Key	Location/Qualifiers
misc_RNA	1..2
	/*tag= a
misc_RNA	4..5
	/*tag= b
misc_RNA	7
	/*tag= c
misc_RNA	12
	/*tag= d

XX
PN US5858988-A.
XX
PD 12-JAN-1999.
XX
PF 22-FEB-1996; 96US-0604871.
XX
PR 22-FEB-1996; 96US-0604871.
PR 24-FEB-1993; 93US-0022055.
PR 23-FEB-1994; 94US-0200650.
XX
PA (WANG/) WANG J H.
XX
PI Wang JH;
XX
DR WPI; 1999-227825/19.
XX
PT Oligoribonucleotide conjugated at 2'-O position with modified phenyl
XX
PS Example 5; Column 25; 27pp; English.
XX
CC The present sequence represents an antisense oligonucleotide directed
CC against synthesis of Duck hepatitis B virus (HBV). The oligonucleotide
CC was made to exemplify the invention. The specification describes an
CC antisense oligoribonucleotide that is conjugated at the 2'-O position
CC with a modified phenyl to produce a derivatized compound. The modified
CC oligoribonucleotide can be used to enhance membrane permeability and
CC stability and may also be used as an antisense therapeutic.
XX
SQ Sequence 15 BP; 2 A; 4 C; 3 G; 6 U; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        781 TGATGGGACAATAA 794
              ||||||||||| ||
Db         14 TGATGGGACAACAA 1
```

RESULT 724
AAZ95561/c
ID AAZ95561 standard; RNA; 15 BP.
XX
AC AAZ95561;
XX
DT 06-JUN-2000 (first entry)
XX
DE Pyrene modified RNA oligonucleotide SEQ ID NO:1.
XX
KW Pyrene modified RNA; detection; hybridisation; uridine; ss.
XX
OS Synthetic.
XX

FH	Key	Location/Qualifiers
FT	modified_base	4
FT		/*tag= a
FT		/note= "2'-O-(1-pyrenylmethyl)uridine"

XX
PN JP2000032999-A.
XX
PD 02-FEB-2000.
XX
PF 17-JUL-1998; 98JP-0202589.
XX
PR 17-JUL-1998; 98JP-0202589.
XX
PA (TOAG) TOA GOSEI CHEM IND LTD.
XX
DR WPI; 2000-295685/26.
XX
PT A pyrene modified RNA and an analytical method of RNA -
XX

```
S   Example 1; Page 10; 15pp; Japanese.
K
C   The present invention describes the detection of RNA with a
C   hybridization assay using pyrene modified RNA. Where the RNA has a
C   structural base sequence containing a base with introduced pyrene.
C   The base with introduced pyrene in uridine residue; the uridine
C   residue having a covalent bond with pyrene at 2'-OH. The hybridization
C   assay for RNA can be used in a homogenous reaction system. It is the
C   sensitive and simple detection of RNA. The present sequence represents
C   a pyrene modified RNA oligonucleotide which is used in the
C   exemplification of the present invention.
K
Q   Sequence 15 BP; 4 A; 2 C; 4 G; 5 U; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
 Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Y        458 TCAACACTTCATGT 471
             ||||||| |||||
D         14 TCAACACTGCATGT 1


ESULT 725
AZ95562/c
D   AAZ95562 standard; RNA; 15 BP.
K
C   AAZ95562;
X
T   06-JUN-2000  (first entry)
X
E   Pyrene modified RNA oligonucleotide SEQ ID NO:2.
X
W   Pyrene modified RNA; detection; hybridisation; uridine; ss.
X
S   Synthetic.
X
H   Key             Location/Qualifiers
T   modified_base   9
T                   /*tag=  a
T                   /note= "2'-O-(1-pyrenylmethyl)uridine"
X
N   JP2000032999-A.
X
D   02-FEB-2000.
X
F   17-JUL-1998;   98JP-0202589.
X
R   17-JUL-1998;   98JP-0202589.
X
A   (TOAG ) TOA GOSEI CHEM IND LTD.
X
R   WPI; 2000-295685/26.
X
T   A pyrene modified RNA and an analytical method of RNA -
X
S   Example 1; Page 10; 15pp; Japanese.
X
C   The present invention describes the detection of RNA with a
C   hybridization assay using pyrene modified RNA. Where the RNA has a
C   structural base sequence containing a base with introduced pyrene.
C   The base with introduced pyrene in uridine residue; the uridine
C   residue having a covalent bond with pyrene at 2'-OH. The hybridization
C   assay for RNA can be used in a homogenous reaction system. It is the
C   sensitive and simple detection of RNA. The present sequence represents
C   a pyrene modified RNA oligonucleotide which is used in the
C   exemplification of the present invention.
X
Q   Sequence 15 BP; 4 A; 2 C; 4 G; 5 U; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
 Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       458 TCAACACTTCATGT 471
             ||||||| |||||
Db        14 TCAACACTGCATGT 1


RESULT 726
AAZ95563/c
ID   AAZ95563 standard; RNA; 15 BP.
XX
AC   AAZ95563;
XX
DT   06-JUN-2000  (first entry)
XX
DE   Pyrene modified RNA oligonucleotide SEQ ID NO:3.
XX
KW   Pyrene modified RNA; detection; hybridisation; uridine; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   11
FT                   /*tag=  a
FT                   /note= "2'-O-(1-pyrenylmethyl)uridine"
XX
PN   JP2000032999-A.
XX
PD   02-FEB-2000.
XX
PF   17-JUL-1998;   98JP-0202589.
XX
PR   17-JUL-1998;   98JP-0202589.
XX
PA   (TOAG ) TOA GOSEI CHEM IND LTD.
XX
DR   WPI; 2000-295685/26.
XX
PT   A pyrene modified RNA and an analytical method of RNA -
XX
PS   Example 1; Page 11; 15pp; Japanese.
XX
CC   The present invention describes the detection of RNA with a
CC   hybridization assay using pyrene modified RNA. Where the RNA has a
CC   structural base sequence containing a base with introduced pyrene.
CC   The base with introduced pyrene in uridine residue; the uridine
CC   residue having a covalent bond with pyrene at 2'-OH. The hybridization
CC   assay for RNA can be used in a homogenous reaction system. It is the
CC   sensitive and simple detection of RNA. The present sequence represents
CC   a pyrene modified RNA oligonucleotide which is used in the
CC   exemplification of the present invention.
XX
SQ   Sequence 15 BP; 4 A; 2 C; 4 G; 5 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       458 TCAACACTTCATGT 471
             ||||||| |||||
Db        14 TCAACACTGCATGT 1


RESULT 727
AAZ95564/c
ID   AAZ95564 standard; RNA; 15 BP.
XX
AC   AAZ95564;
XX
DT   06-JUN-2000  (first entry)
XX
DE   Pyrene modified DNA/RNA oligonucleotide SEQ ID NO:4.
XX
KW   Pyrene modified RNA; detection; hybridisation; uridine; DNA/RNA; ss.
```

XX
SQ Synthetic.
XX
FH Key Location/Qualifiers
FT modified_base 4
FT /*tag= a
FT /note= "2'-O-(1-pyrenylmethyl)uridine"
XX
PN JP2000032999-A.
XX
PD 02-FEB-2000.
XX
PF 17-JUL-1998; 98JP-0202589.
XX
PR 17-JUL-1998; 98JP-0202589.
XX
PA (TOAG) TOA GOSEI CHEM IND LTD.
XX
DR WPI; 2000-295685/26.
XX
PT A pyrene modified RNA and an analytical method of RNA -
XX
PS Example 1; Page 11; 15pp; Japanese.
XX
CC The present invention describes the detection of RNA with a
CC hybridization assay using pyrene modified RNA. Where the RNA has a
CC structural base sequence containing a base with introduced pyrene.
CC The base with introduced pyrene in uridine residue; the uridine
CC residue having a covalent bond with pyrene at 2'-OH. The hybridization
CC assay for RNA can be used in a homogenous reaction system. It is the
CC sensitive and simple detection of RNA. The present sequence represents
CC a pyrene modified RNA oligonucleotide which is used in the
CC exemplification of the present invention.
XX
SQ Sequence 15 BP; 4 A; 2 C; 4 G; 4 T; 1 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 4.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 458 TCAACACTTCATGT 471
||||||| |||||
Db 14 TCAACACTGCATGT 1

RESULT 728
AAZ95565/c
ID AAZ95565 standard; RNA; 15 BP.
XX
AC AAZ95565;
XX
DT 06-JUN-2000 (first entry)
XX
DE Pyrene modified DNA/RNA oligonucleotide SEQ ID NO:5.
XX
KW Pyrene modified RNA; detection; hybridisation; uridine; DNA/RNA; ss.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT modified_base 9
FT /*tag= a
FT /note= "2'-O-(1-pyrenylmethyl)uridine"
XX
PN JP2000032999-A.
XX
PD 02-FEB-2000.
XX
PF 17-JUL-1998; 98JP-0202589.
XX
PR 17-JUL-1998; 98JP-0202589.
XX
PA (TOAG) TOA GOSEI CHEM IND LTD.
XX
DR WPI; 2000-295685/26.
XX
PT A pyrene modified RNA and an analytical method of RNA -
XX
PS Example 1; Page 11; 15pp; Japanese.
XX
CC The present invention describes the detection of RNA with a
CC hybridization assay using pyrene modified RNA. Where the RNA has a
CC structural base sequence containing a base with introduced pyrene.
CC The base with introduced pyrene in uridine residue; the uridine
CC residue having a covalent bond with pyrene at 2'-OH. The hybridization
CC assay for RNA can be used in a homogenous reaction system. It is the
CC sensitive and simple detection of RNA. The present sequence represents
CC a pyrene modified RNA oligonucleotide which is used in the
CC exemplification of the present invention.
XX
SQ Sequence 15 BP; 4 A; 2 C; 4 G; 4 T; 1 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 4.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 458 TCAACACTTCATGT 471
||||||| |||||
Db 14 TCAACACTGCATGT 1

RESULT 729
AAZ95566/c
ID AAZ95566 standard; RNA; 15 BP.
XX
AC AAZ95566;
XX
DT 06-JUN-2000 (first entry)
XX
DE Pyrene modified DNA/RNA oligonucleotide SEQ ID NO:6.
XX
KW Pyrene modified RNA; detection; hybridisation; uridine; DNA/RNA; ss.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT modified_base 11
FT /*tag= a
FT /note= "2'-O-(1-pyrenylmethyl)uridine"
XX
PN JP2000032999-A.
XX
PD 02-FEB-2000.
XX
PF 17-JUL-1998; 98JP-0202589.
XX
PR 17-JUL-1998; 98JP-0202589.
XX
PA (TOAG) TOA GOSEI CHEM IND LTD.
XX
DR WPI; 2000-295685/26.
XX
PT A pyrene modified RNA and an analytical method of RNA -
XX
PS Example 1; Page 11; 15pp; Japanese.
XX
CC The present invention describes the detection of RNA with a
CC hybridization assay using pyrene modified RNA. Where the RNA has a
CC structural base sequence containing a base with introduced pyrene.
CC The base with introduced pyrene in uridine residue; the uridine
CC residue having a covalent bond with pyrene at 2'-OH. The hybridization
CC assay for RNA can be used in a homogenous reaction system. It is the
CC sensitive and simple detection of RNA. The present sequence represents
CC a pyrene modified RNA oligonucleotide which is used in the
CC exemplification of the present invention.
XX

```
Q   Sequence 15 BP; 4 A; 2 C; 4 G; 4 T; 1 U; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
 Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

/       458 TCAACACTTCATGT 471
            ||||||||| |||||
D        14 TCAACACTGCATGT 1


ESULT 730
AZ39954/c
D   AAZ39954 standard; cDNA to mRNA; 15 BP.
K
C   AAZ39954;
K
T   10-FEB-2000  (first entry)
K
E   Human interleukin-2 RNA probe L550A.
K
W   Probe; higher-order structure; structure determination; RNA structure;
W   detection; human; interleukin-2; IL-2 RNA; ds.
K
S   Synthetic.
S   Homo sapiens.
X
N   JP11285386-A.
X
D   19-OCT-1999.
X
F   03-APR-1998;   98JP-0091580.
X
R   03-APR-1998;   98JP-0091580.
X
A   (BUNS-) BUNSHI BIOHOTONICS KENKYUSHO KK.
X
R   WPI; 2000-026815/03.
X
T   Detection of the higher-order structure of an RNA - by hybridising with
T   a specific probe
X
S   Example; Page 13; 26pp; Japanese.
X
C   This sequence represents a probe for human interleukin-2 (IL-2) RNA.
C   The invention relates to a method for the detection of the higher-order
C   structure of an RNA, consisting of: (1) reacting the RNA with a probe
C   (P1) having a base sequence (B1) hybridisable with A1 among the specific
C   continuous base sequences A1 and A2 in the RNA and a probe (P2) having a
C   base sequence (B2) hybridisable with A2 among a specific continuous base
C   sequences A1 and A2 in the RNA; (2) detecting the continuous base
C   sequences B1 and B2 formed by hybridising the probes P1 and P2 on the
C   RNA; and (3) judging that: (i) the higher-order structure of the
C   specific continuous base sequences A1 and A2 in the RNA is
C   single-stranded when sequences B1 and B2 are detected; or (ii) the
C   higher-order structure of the specific continuous base sequences A1 and
C   A2 in the RNA is double-stranded when sequences B1 and B2 are not
C   detected. The method can also detect a change in the higher-order
C   structure of an RNA.
CX
SQ  Sequence 15 BP; 9 A; 0 C; 0 G; 5 T; 1 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1148 TTTATTTTAGATATT 1162
              |||| |||| |||||
Db         15 TTTANTTTAAATATT 1


RESULT 731
AAH20775/c
ID   AAH20775 standard; DNA; 15 BP.
XX
AC   AAH20775;
XX
DT   13-AUG-2001  (first entry)
XX
DB   Complex PCR amplification type 1 primer #20.
XX
KW   PCR primer; amplification; microarray; genotyping; mutational analysis;
KW   cytosine methylation pattern; ss.
XX
OS   Unidentified.
XX
PN   WO200136669-A2.
XX
PD   25-MAY-2001.
XX
PF   12-NOV-2000; 2000WO-DE03973.
XX
PR   12-NOV-1999;   99DE-1056203.
PR   12-OCT-2000; 2000DE-1051714.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Berlin K;
XX
DR   WPI; 2001-343834/36.
XX
PT   Controlling performance of complex polymerase chain reaction
PT   amplification, useful e.g. for genotyping, using a set of many specific
PT   primers and non-specific counter-strand primers  -
XX
PS   Example 2; Page 17; 26pp; German.
XX
CC   This invention describes a novel controllable performance method of
CC   complex polymerase chain reaction (PCR) amplifications. Firstly, PCR is
CC   carried out with at least 50 different primers (P1) of one type,
CC   complementary to one strand of sample DNA, and with a primer (or library
CC   of primers) of a second type (P2) complementary to the other strand of
CC   the DNA, with P2 carrying a marker (M1). Amplicons are hybridized either
CC   to an array of oligonucleotides (ON) that hybridize to the primer used
CC   for the first step, or to its complement, or to an array of ON
CC   complementary to the primers used in PCR, and then the lengths of
CC   amplicons bound to the array are determined using a second marker (M2),
CC   different from M1, that is correlated with the length of the relevant DNA
CC   fragments. Signals from M1 and M2 are quantified at relevant positions in
CC   the ON array. The method is used in whole genomic amplification for
CC   genotyping, mutational analysis or related applications, e.g. determining
CC   the cytosine methylation pattern of DNA. The method makes possible
CC   determination of the number and length of many different amplicons,
CC   something that is almost impossible when using two non-specific primers,
CC   as in the conventional method. AAH20756-AAH20823 represent the PCR
CC   primers used to illustrate the method of the invention.
XX
SQ   Sequence 15 BP; 7 A; 0 C; 3 G; 5 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1258 CAAATAATTTTTTA 1271
              ||| |||||||||||
Db         14 CAACTAATTTTTTA 1


RESULT 732
AAH20782
ID   AAH20782 standard; DNA; 15 BP.
XX
AC   AAH20782;
XX
DT   13-AUG-2001  (first entry)
XX
```

Complex PCR amplification type 1 primer #27.

PCR primer; amplification; microarray; genotyping; mutational analysis; cytosine methylation pattern; ss.

Unidentified.

WO200136669-A2.

25-MAY-2001.

12-NOV-2000; 2000WO-DE03973.

12-NOV-1999; 99DE-1056203.
12-OCT-2000; 2000DE-1051714.

(EPIG-) EPIGENOMICS AG.

Berlin K;

WPI; 2001-343834/36.

Controlling performance of complex polymerase chain reaction amplification, useful e.g. for genotyping, using a set of many specific primers and non-specific counter-strand primers -

Example 2; Page 17; 26pp; German.

This invention describes a novel controllable performance method of complex polymerase chain reaction (PCR) amplifications. Firstly, PCR is carried out with at least 50 different primers (P1) of one type, complementary to one strand of sample DNA, and with a primer (or library of primers) of a second type (P2) complementary to the other strand of the DNA, with P2 carrying a marker (M1). Amplicons are hybridized either to an array of oligonucleotides (ON) that hybridize to the primer used for the first step, or to its complement, or to an array of ON complementary to the primers used in PCR, and then the lengths of amplicons bound to the array are determined using a second marker (M2), different from M1, that is correlated with the length of the relevant DNA fragments. Signals from M1 and M2 are quantified at relevant positions in the ON array. The method is used in whole genomic amplification for genotyping, mutational analysis or related applications, e.g. determining the cytosine methylation pattern of DNA. The method makes possible determination of the number and length of many different amplicons, something that is almost impossible when using two non-specific primers, as in the conventional method. AAH20756-AAH20823 represent the PCR primers used to illustrate the method of the invention.

Sequence 15 BP; 7 A; 0 C; 3 G; 5 T; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

       1086 TTTGGAAAAATAGA 1099
            ||||||||||||| |
          1 TTTGGAAAAATATA 14
```

SULT 733
P98089/c
AAF98089 standard; DNA; 15 BP.

AAF98089;

19-JUN-2001 (first entry)

Human IGERA allele specific oligonucleotide probe SEQ ID NO:128.

Human; polymorphism; immunoglobulin E receptor I alpha subunit; IGERA; single nucleotide polymorphism; SNP; allele specific oligonucleotide; immunoassay; detection; PCR primer; probe; ss.

OS Homo sapiens.
XX
PN WO200111010-A2.
XX
PD 15-FEB-2001.
XX
PF 02-AUG-2000; 2000WO-US21097.
XX
PR 09-AUG-1999; 99US-0147860.
XX
PA (GENA-) GENAISSANCE PHARM INC.
XX
PI Chew A, Denton RR, Duda A, Kliem SE, Lanz EM, Nandabalan K;
PI Stephens JC;
XX
DR WPI; 2001-202766/20.
XX
PT New polynucleotide for gene therapy, comprises nucleotide polymorphisms
PT in the immunoglobulin E receptor I alpha subunit gene -
XX
PS Claim 15; Page 23; 99pp; English.
XX
CC The present invention describes an isolated polynucleotide (I) comprising
CC a nucleotide sequence (S) which is a polymorphic variant of a reference
CC sequence for the human immunoglobulin E receptor I alpha subunit (IGERA)
CC gene or its fragment. The polymorphic variant comprises at least one
CC polymorphism selected from guanine (G) at polymorphic site (PS) 1, PS9,
CC PS10 or PS21, cytosine (C) at PS2, PS3, PS6, PS12, PS18 or PS20, adenine
CC (A) at PS5, PS7, PS11, PS13, PS14, PS15, PS19, or PS22 and thymine (T)
CC at PS4, PS8, PS16 or PS17, or (G) at a position corresponding to
CC nucleotide 251, (A) at a position corresponding to nucleotide 302 or
CC 741, and (T) at a position corresponding to nucleotide 530. (I) can be
CC used in gene therapy. (I) is useful for therapeutic purposes. A
CC polypeptide (II) encoded by (I) is useful in drug screening assays and
CC in assays to measure the binding affinity of one or more candidate drugs
CC targeting (II). An antibody (III) to (II) is useful to immunoprecipitate
CC (II) from solution and also reacts with (II) on Western or immunoblots
CC of polyacrylamide gels on membrane supports or substrates. (III) is also
CC useful in immunoassays to detect (II) in biological samples. AAF97965 to
CC AAF98096 represent IGERA allele specific oligonucleotide probes; AAF98097
CC to AAF98140 represent IGERA gene polymorphism detection primers; and
CC AAF98141 to AAF98180 represent IGERA gene PCR primers which are used in
CC the exemplification of the present invention.
XX
SQ Sequence 15 BP; 7 A; 4 C; 2 G; 2 T; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1346 TTGCCAGCTGTGTT 1359
              |||| |||||||||
Db         15 TTGCAAGCTGTGTT 2
```

RESULT 734
AAF80981/c
ID AAF80981 standard; DNA; 15 BP.
XX
AC AAF80981;
XX
DT 02-MAY-2001 (first entry)
XX
DE PTGS2 allele specific oligonucleotide primer SEQ ID 87.
XX
KW Human; prostaglandin-endoperoxide synthase 2; PTGS2; cyclooxygenase 2;
KW single nucleotide polymorphism; SNP; immune-related disorder; arthritis;
KW inflammation; PCR primer; ss.
XX
OS Homo sapiens.
XX
PN WO200107662-A1.
XX

D 01-FEB-2001.
X
F 24-JUL-2000; 2000WO-US20114.
K
R 22-JUL-1999; 99US-0145170.
K
A (GENA-) GENAISSANCE PHARM INC.
K
I Denton RR, Nandabalan K, Sanchis A, Stephens JC, Tanguay DA;
K
R WPI; 2001-182805/18.
K
T New nucleic acid containing polymorphisms in the cyclooxygenase-2 gene,
T for gene therapy of inflammation and for establishing a genotype or
T haplotype -
K
S Disclosure; Page 23; 118pp; English.
K
C This invention relates to a polynucleotide sequence that is a polymorphic
C variant of the human prostaglandin-endoperoxide synthase 2 (PTGS2) gene
C also referred to as cyclooxygenase 2. The human PTGS2 gene sequence
C AAF80896 contains 27 single nucleotide polymorphisms (SNPs). AAF80896 and
C AAF80897 represent human PTGS2 gene and coding sequence, and the PTGS2
C protein is represented by AAB72199. The invention includes PCR and
C sequencing primers, and probes represented in AAF80898 - AAF81151 which
C are used to isolated and characterise the PTGS2 gene sequence, and to
C locate the positions of the SNPs. PTGS2 proteins and polynucleotide
C sequences are used to express variant PTGS2 proteins, for structural
C analysis or drug-binding studies and also in gene therapy (either
C expressing PTGS2 or inhibitory RNA). Antibodies raised against PTGS2 are
C useful for diagnosis, prognosis and therapy and analysis of the new, and
C known, polymorphisms and used to determine PTGS2 haplotype and genotype,
C especially for determining association between a particular trait, e.g. a
C clinical response to drugs that target PTGS2 but also disease
C susceptibility, severity or stage. Anti-PTGS2 antibodies are particularly
C used for developing diagnostic tests and treatments for immune-related
C disorders such as arthritis and inflammation. The polymorphisms may also
C be used to study expression and biological function of PTGS2. Transgenic
C animals that express PTGS2 are used to study expression of PTGS2
C isogenes, for in vivo drug screening and testing, and for assessing
C effects of therapeutic agents.
X
Q Sequence 15 BP; 10 A; 1 C; 0 G; 4 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 4.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

y 1147 TTTTATTTTAGATA 1160
|||| |||||||||
b 15 TTTTTTTTTAGATA 2

ESULT 735
AF48963
D AAF48963 standard; DNA; 15 BP.
X
C AAF48963;
X
T 30-MAR-2001 (first entry)
X
E IGFBP3 oligonucleotide #2383.
X
W Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
W cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid;
W skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis;
W IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris;
W growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba;
W keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease;
W hyperneovascular condition; hyperplasia; kidney disease;
W neovascular condition of the retina; ss.
X
S Homo sapiens.

X
N WO200078341-A1.
X
D 28-DEC-2000.
X
F 21-JUN-2000; 2000WO-AU00693.
X
R 21-JUN-1999; 99US-0140345.
X
A (MURD-) MURDOCH CHILDRENS RES INST.
X
I Wraight CJ, Werther GA, Edmondson SR;
X
R WPI; 2001-041421/05.
X
T Ameliorating the effects of a disorder, e.g. psoriasis, by
T administering UV (ultra-violet) treatment (optional) and an antisense
T nucleic acid that inhibits or reduces growth factor mediated cell
T proliferation and/or inflammation -
X
S Example 7; Page 59; 201pp; English.
X
C The present invention relates to a method for ameliorating the effects
C of skin disorders. The method comprises contacting the skin with an
C antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1
C receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of
C inhibiting or reducing growth factor mediated cell proliferation,
C inflammation and/or other disorders. The present sequence is an
C oligonucleotide which can be used to design the antisense
C oligonucleotides of the present invention (see AAF45151 and
C AAF45153-F45161). The method is useful for ameliorating the effects of
C psoriasis, ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids,
C keratosis, neoplasias, scleroderma, warts, benign growths, cancers of the
C skin, a hyperneovascular condition such as a neovascular condition of the
C retina, brain or skin, growth factor-mediated malignancies, other
C sclerotic disease, kidney disease, hyperproliferation of the inside of
C blood vessels or any other hyperplasia.
X
Q Sequence 15 BP; 3 A; 1 C; 0 G; 11 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 4.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1520 CTTTATATTTTTAA 1533
|||||| |||||||
Db 2 CTTTATTTTTTTAA 15

RESULT 736
AAF48968
ID AAF48968 standard; DNA; 15 BP.
XX
AC AAF48968;
XX
DT 30-MAR-2001 (first entry)
XX
DE IGFBP3 oligonucleotide #2388.
XX
KW Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
KW cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid;
KW skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis;
KW IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris;
KW growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba;
KW keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease;
KW hyperneovascular condition; hyperplasia; kidney disease;
KW neovascular condition of the retina; ss.
XX
OS Homo sapiens.
XX
PN WO200078341-A1.
XX
PD 28-DEC-2000.

21-JUN-2000; 2000WO-AU00693.

21-JUN-1999; 99US-0140345.

(MURD-) MURDOCH CHILDRENS RES INST.

Wraight CJ, Werther GA, Edmondson SR;

WPI; 2001-041421/05.

Ameliorating the effects of a disorder, e.g. psoriasis, by administering UV (ultra-violet) treatment (optional) and an antisense nucleic acid that inhibits or reduces growth factor mediated cell proliferation and/or inflammation -

Example 7; Page 59; 201pp; English.

The present invention relates to a method for ameliorating the effects of skin disorders. The method comprises contacting the skin with an antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1 receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of inhibiting or reducing growth factor mediated cell proliferation, inflammation and/or other disorders. The present sequence is an oligonucleotide which can be used to design the antisense oligonucleotides of the present invention (see AAF45151 and AAF45153-F45161). The method is useful for ameliorating the effects of psoriasis, ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis, neoplasias, scleroderma, warts, benign growths, cancers of the skin, a hyperneovascular condition such as a neovascular condition of the retina, brain or skin, growth factor-mediated malignancies, other sclerotic disease, kidney disease, hyperproliferation of the inside of blood vessels or any other hyperplasia.

Sequence 15 BP; 3 A; 1 C; 0 G; 11 T; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

       1524 ATATTTTTAACTTT 1537
            || ||||||||||
          1 ATTTTTTTAACTTT 14
```

SULT 737
F49026/c

AAF49026 standard; DNA; 15 BP.

AAF49026;

30-MAR-2001 (first entry)

IGFBP3 oligonucleotide #2446.

Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic; cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid; skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis; IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris; growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba; keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease; hyperneovascular condition; hyperplasia; kidney disease; neovascular condition of the retina; ss.

Homo sapiens.

WO200078341-A1.

28-DEC-2000.

21-JUN-2000; 2000WO-AU00693.

21-JUN-1999; 99US-0140345.

(MURD-) MURDOCH CHILDRENS RES INST.

Wraight CJ, Werther GA, Edmondson SR;

WPI; 2001-041421/05.

Ameliorating the effects of a disorder, e.g. psoriasis, by administering UV (ultra-violet) treatment (optional) and an antisense nucleic acid that inhibits or reduces growth factor mediated cell proliferation and/or inflammation -

Example 7; Page 60; 201pp; English.

The present invention relates to a method for ameliorating the effects of skin disorders. The method comprises contacting the skin with an antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1 receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of inhibiting or reducing growth factor mediated cell proliferation, inflammation and/or other disorders. The present sequence is an oligonucleotide which can be used to design the antisense oligonucleotides of the present invention (see AAF45151 and AAF45153-F45161). The method is useful for ameliorating the effects of psoriasis, ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis, neoplasias, scleroderma, warts, benign growths, cancers of the skin, a hyperneovascular condition such as a neovascular condition of the retina, brain or skin, growth factor-mediated malignancies, other sclerotic disease, kidney disease, hyperproliferation of the inside of blood vessels or any other hyperplasia.

Sequence 15 BP; 9 A; 0 C; 1 G; 5 T; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1038 TATTTATTATTTAT 1051
              |||||| |||||||
Db         15 TATTTACTATTTAT 2
```

RESULT 738
AAF49027/c

AAF49027 standard; DNA; 15 BP.

AAF49027;

30-MAR-2001 (first entry)

IGFBP3 oligonucleotide #2447.

Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic; cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid; skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis; IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris; growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba; keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease; hyperneovascular condition; hyperplasia; kidney disease; neovascular condition of the retina; ss.

Homo sapiens.

WO200078341-A1.

28-DEC-2000.

21-JUN-2000; 2000WO-AU00693.

21-JUN-1999; 99US-0140345.

(MURD-) MURDOCH CHILDRENS RES INST.

Wraight CJ, Werther GA, Edmondson SR;

```
X
R   WPI; 2001-041421/05.
X
T   Ameliorating the effects of a disorder, e.g. psoriasis, by
T   administering UV (ultra-violet) treatment (optional) and an antisense
T   nucleic acid that inhibits or reduces growth factor mediated cell
T   proliferation and/or inflammation -
X
S   Example 7; Page 60; 201pp; English.
X
C   The present invention relates to a method for ameliorating the effects
C   of skin disorders. The method comprises contacting the skin with an
C   antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1
C   receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of
C   inhibiting or reducing growth factor mediated cell proliferation,
C   inflammation and/or other disorders. The present sequence is an
C   oligonucleotide which can be used to design the antisense
C   oligonucleotides of the present invention (see AAF45151 and
C   AAF45153-F45161). The method is useful for ameliorating the effects of
C   psoriasis, ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids,
C   keratosis, neoplasias, scleroderma, warts, benign growths, cancers of the
C   skin, a hyperneovascular condition such as a neovascular condition of the
C   retina, brain or skin, growth factor-mediated malignancies, other
C   sclerotic disease, kidney disease, hyperproliferation of the inside of
C   blood vessels or any other hyperplasia.
X
Q   Sequence 15 BP; 10 A; 0 C; 1 G; 4 T; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
 Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y       1038 TATTTATTATTTAT 1051
             ||||||  |||||||
b         14 TATTTACTATTTAT 1


ESULT 739
AC89686/c
D   AAC89686 standard; DNA; 15 BP.
X
AC  AAC89686;
X
DT  13-MAR-2001  (first entry)
X
DE  P. falciparum chitinase translation initiation site SEQ ID NO: 26.
X
KW  Malaria; mosquito; chitinase; fungal disease; parasitic disease;
KW  veterinary disease; arthropod pest; PCR primer; probe; ss.
X
OS  Plasmodium falciparum.
X
PN  WO200073488-A1.
X
PD  07-DEC-2000.
X
PF  26-MAY-2000; 2000WO-US14536.
X
PR  28-MAY-1999;   99US-0136508.
PR  03-FEB-2000; 2000US-0180051.
X
PA  (TEXA ) UNIV TEXAS SYSTEM.
X
PI  Vinetz JM;
X
DR  WPI; 2001-061553/07.
X
PT  New nucleic acid encoding a Plasmodium species chitinase is useful for
PT  preventing transmission of malaria by mosquito feeding on subject that
PT  may harbor Plasmodium species organisms  -
X
PS  Example 11; Page 133; 137pp; English.
X
CC  The present invention provides the protein and coding sequences of the
CC  Plasmodium falciparum and P. gallinaceum chitinase enzymes. These
CC  organisms are the cause of malaria in humans. The sequences are useful
CC  in the prevention and treatment of malaria, fungal diseases, parasitic
CC  diseases and veterinary diseases, in preventing the transmission of
CC  malaria and in the control of arthropod pests in agriculture.
XX
SQ  Sequence 15 BP; 10 A; 1 C; 0 G; 4 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATT 1060
              |||||  |||||||
Db         14 TTTATATATTTATT 1


RESULT 740
ABX04022/c
ID  ABX04022 standard; DNA; 15 BP.
XX
AC  ABX04022;
XX
DT  09-JAN-2003  (first entry)
XX
DE  Resistance gene linA DNA fragment.
XX
KW  Detection; probe; diagnosis; oral disease; paradontitis; caries; therapy;
KW  polymorphism; virulence factor; antibiotic resistance gene; prognosis;
KW  oral infection; detection; pathogen; coronary heart disease;
KW  diabetic symptom; ss.
XX
OS  Unidentified.
XX
PN  DE20110013-U1.
XX
PD  18-OCT-2001.
XX
PF  13-MAR-2001; 2001DE-2010013.
XX
PR  13-MAR-2001; 2001DE-2010013.
PR  13-MAR-2001; 2001DE-1012348.
XX
PA  (ROET/) ROETGER A.
XX
PI  Roetger A;
XX
DR  WPI; 2001-657777/76.
XX
PT  Oligonucleotide array, useful for diagnosing oral diseases,
PT  particularly paradontitis, carries human or microbial reference
PT  sequences  -
XX
PS  Claim 10; Page 29; 58pp; German.
XX
CC  This invention describes a novel nucleotide carrier with probes used for
CC  diagnosis of oral diseases, particularly paradontitis, but also caries,
CC  especially to identify genetic predisposition (as indicated by
CC  polymorphisms) to disease and to identify causative microorganisms or
CC  their associated virulence factors and antibiotic resistance genes, e.g.
CC  for selection of therapy and for prognosis. They are also useful for
CC  research into oral infections. The carriers allow simultaneous detection
CC  of both host and pathogen parameters, providing quickly and simply an
CC  individual's paradontitis profile, including detection of pathogens that
CC  are associated with increased risk of coronary heart diseases and/or
CC  aggravation of diabetic symptoms, and of opportunistic pathogens.
CC  ABX03870-ABX04044 represent DNA fragments used to illustrate the method
CC  of the invention.
XX
SQ  Sequence 15 BP; 2 A; 1 C; 7 G; 5 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
```

```
 Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

/        938 AGCCACCATCTTAC 951
             ||||||||||| ||
\         14 AGCCACCATCTAAC 1


ESULT 741
AL48101/c
)   AAL48101 standard; DNA; 15 BP.
:
:   AAL48101;
:
:   27-SEP-2002  (first entry)
:
:   Human neuropeptide Y allele specific primer SEQ ID NO: 25.
:
:   Human; neuropeptide Y; NPY; isogene; SNP; atherosclerosis; obesity;
:   psychological disorder; single nucleotide polymorphism; alcoholism;
:   antiarteriosclerotic; anorectic; PCR; primer; ss.
:
:   Homo sapiens.
:
:   WO200251857-A1.
:
)   04-JUL-2002.
:
:   21-DEC-2000; 2000WO-US34758.
:
:   21-DEC-2000; 2000WO-US34758.
:
:   (GENA-) GENAISSANCE PHARM INC.
:
:   Chew A,  Denton RR,  Lanz EM,  Nandabalan K,  Stephens JC;
:
:   WPI; 2002-566671/60.
:
:   New genetic variants of the human Neuropeptide Y (NPY) gene useful for
:   treating disorders affected by abnormal expression or function of NPY
:   isogene e.g., atherosclerosis or obesity -
:
:   Claim 11; Page 17; 80pp; English.
:
:   The present invention provides the human neuropeptide Y (NPY) gene and
:   single nucleotide polymorphisms (SNPs) identified therein. The sequence
:   can be used in the treatment of disorders associated with NPY, including
:   atherosclerosis, obesity, psychological disorders and alcoholism. The
:   present sequence is an allele specific primer used to isolate the human
:   NPY coding sequence.
:
)   Sequence 15 BP; 7 A; 5 C; 2 G; 1 T; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
 Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

/       1357 GTTGGTAGTGCTGT 1370
             ||||||||| ||||
\         15 GTTGGTAGTCCTGT 2


ESULT 742
BK36967
)   ABK36967 standard; DNA; 15 BP.
:
:   ABK36967;
:
:   08-MAY-2002  (first entry)
:
:   Human ALAS2 gene allele-specific oligonucleotide probe #5.
:
:   Human; aminolevulinate delta synthase 2; ALAS2; haplotyping; primer; ss;
```

```
KW   haplotype pair; single nucleotide polymorphism; genotyping; antianaemic;
KW   gene therapy; drug screening; X-linked sideroblastic anaemia; sequencing;
KW   hypochromic anaemia; probe; PCR.
XX
OS   Homo sapiens.
XX
PN   WO200210454-A2.
XX
PD   07-FEB-2002.
XX
PF   30-JUL-2001; 2001WO-US23914.
XX
PR   28-JUL-2000; 2000US-221827P.
XX
PA   (GENA-) GENAISSANCE PHARM INC.
XX
PI   Choi JY,  Koshy B,  Kliem S,  Stephens JC;
XX
DR   WPI; 2002-188755/24.
XX
PT   New isolated human aminolevulinate delta synthase 2 polynucleotide,
PT   useful for therapeutic purposes, for studying the expression and
PT   function of the polynucleotide, and for expressing the aminolevulinate
PT   protein -
XX
PS   Claim 16; Page 13; 90pp; English.
XX
CC   The invention relates to single nucleotide polymorphisms in the gene
CC   encoding human aminolevulinate delta synthase 2 (ALAS2). A method for
CC   haplotyping the ALAS2 gene in an individual comprises identifying the
CC   nucleotide at one or more polymorphic sites and determining whether one
CC   of the copies of the gene is defined by one of the ALAS2 haplotypes given
CC   in the specification or whether both copies are defined by a haplotype
CC   pair. This method is useful in genotyping, whereby all possible haplotype
CC   pairs can be assigned to specific genotypes. An association between a
CC   trait and a haplotype or haplotype pair of the ALAS2 gene can be
CC   identified by comparing the frequency of the haplotype or haplotype pair
CC   in a population exhibiting the trait with the frequency of the haplotype
CC   or haplotype pair in a reference population, where a higher haplotype
CC   frequency in the trait population indicates the trait is associated with
CC   the haplotype or haplotype pair. ALAS2 and its corresponding DNA are used
CC   for studying the expression and function of ALAS2, for use in screening
CC   for candidate drugs to treat diseases related to ALAS2 activity, such as
CC   X-linked sideroblastic anaemia and hypochromic anaemia. The sequences are
CC   also useful for studying the effect of variation on the biological
CC   activity of ALAS2 as well as on the binding affinity of candidate drugs
CC   targeting ALAS2. Sequences ABK36963-ABK37027 represent allele-specific
CC   oligonucleotide probes, sequencing primers and PCR primers used to detect
CC   ALAS2 gene polymorphisms.
XX
SQ   Sequence 15 BP; 2 A; 4 C; 6 G; 2 T; 1 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        691 TTGGGCCAAGGGCC 704
              |||||| |||||||
Db          2 TTGGGCRAAGGGCC 15


RESULT 743
ABL46363
ID   ABL46363 standard; DNA; 15 BP.
XX
AC   ABL46363;
XX
DT   26-APR-2002  (first entry)
XX
DE   Human interferon gamma oligonucleotide SEQ ID NO:330.
XX
KW   Nucleic acid accessible hybridisation site; detection; hybridisation;
KW   characterisation; identification; nucleic acid structure; diagnosis;
```

W PCR primer; probe; ss.
K
S Homo sapiens.
S Synthetic.
(
T WO200198537-A2.
(
) 27-DEC-2001.
(
? 15-JUN-2001; 2001WO-US19401.
(
R 17-JUN-2000; 2000US-212308P.
R 15-JUN-2001; 2001US-0212308.
K
A (THIR-) THIRD WAVE TECHNOLOGIES INC.
K
I Lyamichev V, Allawi H, Dong F, Neri BP, Vener IT;
K
R WPI; 2002-049698/06.
K
T Identifying oligonucleotides hybridizing to nucleic acids containing
T secondary structure, useful in clinical diagnosis, comprises
T identifying primers that interact with the target to form an extension
T product under amplification conditions -
K
S Claim 48; Fig 82A; 409pp; English.
K
C The present invention describes a method for identifying oligonucleotides
C with desired hybridisation properties to nucleic acid targets containing
C secondary structure. The method comprises amplifying a target nucleic
C acid having at least one accessible and one inaccessible site. Primers
C that form an extension product are identified as the oligonucleotides
C which can interact with the folded target nucleic acid. Oligonucleotides
C from the present invention can be used in novel detection methods for
C clinical diagnostic purposes, including the detection and identification
C of pathogenic organisms (e.g. HIV). The method allows the ability to
C rapidly analyse nucleic acid structures. ABL46034 to ABL46367 represent
C sequences used in the exemplification of the present invention.
X
Q Sequence 15 BP; 5 A; 2 C; 3 G; 5 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 4.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1511 AATACAAGGCTTTA 1524
|||||||||||||
Db 2 ATTACAAGGCTTTA 15

ESULT 744
AD22543
D AAD22543 standard; RNA; 15 BP.
X
C AAD22543;
X
T 12-FEB-2002 (first entry)
X
E Duck hepatitis B virus pre-S gene sense RNA fragment.
X
W RNase inhibitor; anti-HIV; cytostatic; hepatotropic; antiinflammatory;
W virucide; oncogene; cancer; transcription; translation; leukaemia virus;
W human immunodeficiency virus; duck; hepatitis B virus; polymerase;
W viral reverse transcriptase; pre-S gene; ss.
X
S Duck hepatitis B virus.
X
N US6291438-B1.
X
D 18-SEP-2001.
X
F 06-OCT-1998; 98US-0167375.
X
R 24-FEB-1993; 93US-0022055.
R 23-FEB-1994; 94US-0200650.
R 22-FEB-1996; 96US-0604871.
X
A (WANG/) WANG J H.
X
I Wang JH;
X
R WPI; 2002-009339/01.
X
T Derivatized antisense oligoribonucleotide useful to inhibit e.g. viral
T reverse transcriptase comprises at the 2'-O position of the
T oligoribonucleotide, a hydrophobic carrier reagent containing a poly
T substituted phenyl compound -
X
S Claim 23; Column 37; 56pp; English.
X
C The invention relates to derivatised antisense oligoribonucleotides with
C enhanced membrane permeability and stability. The derivatised antisense
C oligoribonucleotide complementary to a sequence of nucleotides found
C in a virus or a cell is useful for inhibiting e.g., viral reverse
C transcriptase. Derivatised antisense oligoribonucleotide is conjugated at
C the 2'-O position with a hydrophobic carrier reagent containing a poly
C substituted phenyl compound. The derivatised oligoribonucleotides are
C used to decrease the expression of oncogenes and thereby decrease the
C expression of cancer cells which rely upon oncogene expression for their
C phenotypic and pathological properties. The oligoribonucleotides are also
C used for increasing the effectiveness of antisense oligonucleotide
C targetted to a gene associated with a disease or a condition in an
C animal. To alter gene transcription and/or translation for any gene or
C gene segment responsible for expression, to inhibit viral reverse
C transcriptase, to inhibit the expression of leukaemia virus, hepatitis
C virus, oncogenes and human immunodeficiency virus. The present sequence
C is duck hepatitis B virus pre-S gene sense RNA fragment used in the
C treatment of duck hepatitis B virus.
X
SQ Sequence 15 BP; 6 A; 3 C; 4 G; 2 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 78.6%; Pred. No. 4.6e+02;
Matches 11; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 781 TGATGGGACAATAA 794
:||:|||||| ||
Db 2 UGAUGGGACAACAA 15

RESULT 745
AAD22544/c
ID AAD22544 standard; RNA; 15 BP.
XX
AC AAD22544;
XX
DT 12-FEB-2002 (first entry)
XX
DE Duck hepatitis B virus pre-S gene antisense RNA fragment.
XX
KW RNase inhibitor; anti-HIV; cytostatic; hepatotropic; antiinflammatory;
KW virucide; oncogene; cancer; transcription; translation; leukaemia virus;
KW human immunodeficiency virus; duck; hepatitis B virus; polymerase;
KW viral reverse transcriptase; pre-S gene; antisense; ss.
XX
OS Duck hepatitis B virus.
XX
PN US6291438-B1.
XX
PD 18-SEP-2001.
XX
PF 06-OCT-1998; 98US-0167375.
XX
PR 24-FEB-1993; 93US-0022055.
PR 23-FEB-1994; 94US-0200650.
PR 22-FEB-1996; 96US-0604871.

(WANG/) WANG J H.

Wang JH;

WPI; 2002-009339/01.

Derivatized antisense oligoribonucleotide useful to inhibit e.g. viral reverse transcriptase comprises at the 2'-O position of the oligoribonucleotide, a hydrophobic carrier reagent containing a poly substituted phenyl compound -

Claim 23; Column 37; 56pp; English.

The invention relates to derivatised antisense oligoribonucleotides with enhanced membrane permeability and stability. The derivatised antisense oligoribonucleotide complementary to a sequence of nucleotides found in a virus or a cell is useful for inhibiting e.g., viral reverse transcriptase. Derivatised antisense oligoribonucleotide is conjugated at the 2'-O position with a hydrophobic carrier reagent containing a poly substituted phenyl compound. The derivatised oligoribonucleotides are used to decrease the expression of oncogenes and thereby decrease the expression of cancer cells which rely upon oncogene expression for their phenotypic and pathological properties. The oligoribonucleotides are also used for increasing the effectiveness of antisense oligonucleotide targetted to a gene associated with a disease or a condition in an animal. To alter gene transcription and/or translation for any gene or gene segment responsible for expression, to inhibit viral reverse transcriptase, to inhibit the expression of leukaemia virus, hepatitis virus, oncogenes and human immunodeficiency virus. The present sequence is duck hepatitis B virus pre-S gene antisense RNA fragment used in the treatment of duck hepatitis B virus.

Sequence 15 BP; 2 A; 4 C; 3 G; 6 U; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

        781 TGATGGGACAATAA 794
            ||||||||||| ||
         14 TGATGGGACAACAA 1
```

SULT 746
X79855
ABX79855 standard; cDNA; 15 BP.

ABX79855;

17-APR-2003 (first entry)

EST polymorphic DNA repeat polynucleotide #180.

EST; expressed sequence tag; ss; polymorphic repeat; tandem repeat; polymorphic marker prediction of ubiquitous simple sequences; POMPOUS; Rep-X; human; genetic disease; drug-treatment; Machado-Joseph; Haw River syndrome; Huntington's disease; fragile-X syndrome; Fredreich's ataxis; myotonic dystrophy; hyperandrogenaemia; spinal atrophy; bulbar atrophy; spinocerebellar ataxia.

Homo sapiens.

US6472154-B1.

29-OCT-2002.

31-DEC-1999; 99US-0475947.

31-DEC-1999; 99US-0475947.

(TEXA) UNIV TEXAS SYSTEM.

PI Garner HR, Wren JD, Minna JD, Fondon JW;
XX
DR WPI; 2003-208818/20.
XX
PT Identifying a candidate polymorphic repeat within a coding sequence, for understanding or treating genetic disease, comprises detecting tandem repeats in a target coding sequence and scoring the repeats for polymorphic probability -
XX
PS Examples; Column 835; 588pp; English.
XX
CC The invention discloses a method for identifying a candidate polymorphic repeat within a coding sequence (expressed sequence tag, EST), which comprises detecting tandem repeats in a target coding sequence, scoring the repeats for polymorphic probability and generating a dataset correlating the repeats with polymorphic probability to identify a candidate polymorphic repeat. The computational methods (polymorphic marker prediction of ubiquitous simple sequences, POMPOUS, and Rep-X) are useful for identifying and detecting candidate polymorphic repeats in human genes, which can be used to understand, treat or eliminate genetic diseases, predispositions or adverse drug-treatment reactions. Examples of diseases linked to nucleotide repeats are Machado-Joseph, Haw River syndrome, Huntington's disease, fragile-X syndrome, Fredreich's ataxis, myotonic dystrophy, hyperandrogenaemia, spinal and bulbar atrophy and spinocerebellar ataxia. The sequences presented in ABX79676-ABX80022 are the polymorphic repeats identified for a search of human ESTs.
XX
SQ Sequence 15 BP; 2 A; 5 C; 4 G; 4 T; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 4.6e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        402 CTCTGTGGTATCCA 415
              ||||||| |||||
Db          1 CTCTGTGGCATCCA 14
```

RESULT 747
ABV93501
ID ABV93501 standard; DNA; 15 BP.
XX
AC ABV93501;
XX
DT 08-JAN-2003 (first entry)
XX
DE Bacillus thuringiensis toxin Cry mutant oligonucleotide #24.
XX
KW Bacillus thuringiensis; insecticide; toxin; Cry; pepsin cleavage site; pepsin; PCS; ss.
XX
OS Bacillus thuringiensis.
OS Synthetic.
XX
PN FR2822157-A1.
XX
PD 20-SEP-2002.
XX
PF 19-MAR-2001; 2001FR-0003691.
XX
PR 19-MAR-2001; 2001FR-0003691.
XX
PA (AVET) AVENTIS CROPSCIENCE SA.
XX
PI Freyssinet G, Rang C, Frutos R;
XX
DR WPI; 2003-002439/01.
XX
PT New modified Cry protein, useful as insecticide, comprises at least one additional pepsin cleavage site to reduce persistence in mammalian gut
XX
PS Example 3; Page 27; 134pp; French.
XX

C The present invention describes a modified Cry protein (I) that is
C sensitive to pepsin and comprises at least one additional pepsin cleavage
C site (PCS). Also described: (a) increasing pepsin sensitivity of Cry
C proteins by incorporating at least one extra PCS; (b) polynucleotides
C (II) that encode (I); (c) chimeric genes (CG) that contain a promoter,
C (II) and terminator; (d) expression or transformation vector (III) that
C contains CG; (e) host organism (IV) transformed with (III), also, where
C the organism is a plant, its parts and seeds; (f) production of (I) by
C growing (IV); and (g) mono- or polyclonal antibodies (Ab) directed
C against (I). (I) has insecticide activity. (I) can be used as
C insecticides, particularly where expressed in transgenic plants. (I)
C are sensitive to enzymes in the digestive tract of mammals, so do not
C persist in the tract (lack of persistence is required by regulatory
C authorities for use, in foods, of seeds containing Cry proteins). Extra
C PCS do not increase degradation in the digestive tract of insects, so
C have no effect on insecticidal activity. ABV93450 to ABV93909 and
C ABP67997 to ABP68308 represent sequences used in the exemplification of
C the present invention.
XX
SQ Sequence 15 BP; 7 A; 0 C; 1 G; 7 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 4.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1392 TTAGAACTATTAAA 1405
|||||| |||||||
Db 1 TTAGAATTATTAAA 14

RESULT 748
ABV93785
ID ABV93785 standard; DNA; 15 BP.
XX
AC ABV93785;
XX
DT 08-JAN-2003 (first entry)
XX
DE B. thuringiensis toxin Cry oligonucleotide mutant #24 SEQ ID NO:36.
XX
KW Bacillus thuringiensis; insecticide; toxin; Cry; pepsin cleavage site;
KW pepsin; PCS; ss.
XX
OS Bacillus thuringiensis.
OS Synthetic.
XX
PN FR2822157-A1.
XX
PD 20-SEP-2002.
XX
PF 19-MAR-2001; 2001FR-0003691.
XX
PR 19-MAR-2001; 2001FR-0003691.
XX
PA (AVET) AVENTIS CROPSCIENCE SA.
XX
PI Freyssinet G, Rang C, Frutos R;
XX
DR WPI; 2003-002439/01.
XX
PT New modified Cry protein, useful as insecticide, comprises at least one
PT additional pepsin cleavage site to reduce persistence in mammalian gut
XX
PS Disclosure; Page 106; 134pp; French.
XX
CC The present invention describes a modified Cry protein (I) that is
CC sensitive to pepsin and comprises at least one additional pepsin cleavage
CC site (PCS). Also described: (a) increasing pepsin sensitivity of Cry
CC proteins by incorporating at least one extra PCS; (b) polynucleotides
CC (II) that encode (I); (c) chimeric genes (CG) that contain a promoter,
CC (II) and terminator; (d) expression or transformation vector (III) that
CC contains CG; (e) host organism (IV) transformed with (III), also, where
CC the organism is a plant, its parts and seeds; (f) production of (I) by
CC growing (IV); and (g) mono- or polyclonal antibodies (Ab) directed
CC against (I). (I) has insecticide activity. (I) can be used as
CC insecticides, particularly where expressed in transgenic plants. (I)
CC are sensitive to enzymes in the digestive tract of mammals, so do not
CC persist in the tract (lack of persistence is required by regulatory
CC authorities for use, in foods, of seeds containing Cry proteins). Extra
CC PCS do not increase degradation in the digestive tract of insects, so
CC have no effect on insecticidal activity. ABV93450 to ABV93909 and
CC ABP67997 to ABP68308 represent sequences used in the exemplification of
CC the present invention.
XX
SQ Sequence 15 BP; 7 A; 0 C; 1 G; 7 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 4.6e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1392 TTAGAACTATTAAA 1405
|||||| |||||||
Db 1 TTAGAATTATTAAA 14

RESULT 749
AAV49172/c
ID AAV49172 standard; DNA; 16 BP.
XX
AC AAV49172;
XX
DT 15-OCT-1998 (first entry)
XX
DE rb gene antisense oligonucleotide rb-N-120.
XX
KW rb gene; antisense oligonucleotide; modulate; gene expression; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN EP856579-A1.
XX
PD 05-AUG-1998.
XX
PF 31-JAN-1997; 97EP-0101531.
XX
PR 31-JAN-1997; 97EP-0101531.
XX
PA (BIOG-) BIOGNOSTIK GES BIOMOLEKULARE DIAGNOSTIK.
XX
PI Brysch W, Schlingensiepen K;
XX
DR WPI; 1998-400910/35.
XX
PT Preparation of antisense oligo:nucleotide(s) which lack long runs of
PT consecutive guanosine or inosine - and have specific ratio of
PT residues able to form two or three hydrogen bonds, have greater
PT activity and reduced toxicity, used therapeutically or to modulate
PT growth of cells in culture
XX
PS Example 7; Fig 9c; 286pp; English.
XX
CC AAV49008-236 represent antisense oligonucleotides directed against
CC the rb gene. Of these, only oligonucleotides AAV49008-52 resulted in
CC effective downregulation of negative growth control by rb, while
CC oligonucleotides AAV49052-236 had little effect. The oligonucleotides
CC exemplify the invention. The specification describes oligonucleotides
CC that contain 8-30 nucleotides, which contain at most 8 nucleotides
CC that can each form three hydrogen bonds to cytosine; do not contain
CC four consecutive nucleotides able to form three H-bonds each to four
CC consecutive cytosines; do not contain two sequences of three consecutive
CC nucleotides each able to form three H-bonds to three consecutive
CC cytosines, and the ratio between residues able to form two H-bonds
CC each (2R) or three such bonds (3R) is given by 2R/3R = 0.33-0.72. The
CC oligonucleotides are used to modulate expression of genes, particularly
CC the genes for p53, ErB-2, junB, junD, TGF-beta 1 or beta 2 to control

proliferation of primary cell cultures (e.g. bone marrow stem, liver or kidney cells, osteoclasts, osteoblasts and/or keratinocytes). The oligonucleotides can also be used to analyse function of proteins (by altering their expression or activity) and therapeutically, e.g. in cases of cancer or (targeting TGF) for stimulating the immune system.

Sequence 16 BP; 5 A; 0 C; 2 G; 9 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 16;
Best Local Similarity 92.9%; Pred. No. 4.9e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
      1204 ATTAAACAAACAAA 1217
           ||||||||| ||||
        14 ATTAAACAATCAAA 1
```

SULT 750
V49081/c
AAV49081 standard; DNA; 16 BP.

AAV49081;

15-OCT-1998 (first entry)

rb gene antisense oligonucleotide rb-N-29.

rb gene; antisense oligonucleotide; modulate; gene expression; ss.

Synthetic.
Homo sapiens.

EP856579-A1.

05-AUG-1998.

31-JAN-1997; 97EP-0101531.

31-JAN-1997; 97EP-0101531.

(BIOG-) BIOGNOSTIK GES BIOMOLEKULARE DIAGNOSTIK.

Brysch W, Schlingensiepen K;

WPI; 1998-400910/35.

Preparation of antisense oligo:nucleotide(s) which lack long runs of consecutive guanosine or inosine - and have specific ratio of residues able to form two or three hydrogen bonds, have greater activity and reduced toxicity, used therapeutically or to modulate growth of cells in culture

Example 7; Fig 9a; 286pp; English.

AAV49008-236 represent antisense oligonucleotides directed against the rb gene. Of these, only oligonucleotides AAV49008-52 resulted in effective downregulation of negative growth control by rb, while oligonucleotides AAV49052-236 had little effect. The oligonucleotides exemplify the invention. The specification describes oligonucleotides that contain 8-30 nucleotides, which contain at most 8 nucleotides that can each form three hydrogen bonds to cytosine; do not contain four consecutive nucleotides able to form three H-bonds each to four consecutive cytosines; do not contain two sequences of three consecutive nucleotides each able to form three H-bonds to three consecutive cytosines, and the ratio between residues able to form two H-bonds each (2R) or three such bonds (3R) is given by 2R/3R = 0.33-0.72. The oligonucleotides are used to modulate expression of genes, particularly the genes for p53, ErB-2, junB, junD, TGF-beta 1 or beta 2 to control proliferation of primary cell cultures (e.g. bone marrow stem, liver or kidney cells, osteoclasts, osteoblasts and/or keratinocytes). The oligonucleotides can also be used to analyse function of proteins (by altering their expression or activity) and therapeutically, e.g. in cases of cancer or (targeting TGF) for stimulating the immune system.

XX
SQ Sequence 16 BP; 8 A; 1 C; 1 G; 6 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 16;
Best Local Similarity 92.9%; Pred. No. 4.9e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy       1171 TTTTATTAGATAAA 1184
              ||||||||| ||||
Db         14 TTTTATTAGCTAAA 1
```

RESULT 751
AAV48657/c
ID AAV48657 standard; DNA; 16 BP.
XX
AC AAV48657;
XX
DT 15-OCT-1998 (first entry)
XX
DE junB gene antisense oligonucleotide JunB-N-43.
XX
KW junB; junD; antisense oligonucleotide; modulate; gene expression; ss.
XX
OS Synthetic.
OS Homo sapiens.
XX
PN EP856579-A1.
XX
PD 05-AUG-1998.
XX
PF 31-JAN-1997; 97EP-0101531.
XX
PR 31-JAN-1997; 97EP-0101531.
XX
PA (BIOG-) BIOGNOSTIK GES BIOMOLEKULARE DIAGNOSTIK.
XX
PI Brysch W, Schlingensiepen K;
XX
DR WPI; 1998-400910/35.
XX
PT Preparation of antisense oligo:nucleotide(s) which lack long runs of
PT consecutive guanosine or inosine - and have specific ratio of
PT residues able to form two or three hydrogen bonds, have greater
PT activity and reduced toxicity, used therapeutically or to modulate
PT growth of cells in culture
XX
PS Example 3; Fig 5b; 286pp; English.
XX
CC AAV48564-708 represent antisense oligonucleotides directed against the
CC junB and junD genes. Of these, only oligonucleotides AAV48565-614
CC resulted in effective downregulation of negative growth control by JunB
CC or JunD, while AAV48615-708 had little effect. The oligonucleotides
CC exemplify the invention. The specification describes oligonucleotides
CC that contain 8-30 nucleotides, which contain at most 8 nucleotides that
CC can each form three hydrogen bonds to cytosine; do not contain four
CC consecutive nucleotides able to form three H-bonds each to four
CC consecutive cytosines; do not contain two sequences of three consecutive
CC nucleotides each able to form three H-bonds to three consecutive
CC cytosines, and the ratio between residues able to form two H-bonds each
CC (2R) or three such bonds (3R) is given by 2R/3R = 0.33-0.72. The
CC oligonucleotides are used to modulate expression of genes, particularly
CC the genes for p53, ErbB-2, junB, junD, TGF-beta 1 or beta 2 to control
CC proliferation of primary cell cultures (e.g. bone marrow stem, liver or
CC kidney cells, osteoclasts, osteoblasts and/or keratinocytes). The
CC oligonucleotides can also be used to analyse function of proteins (by
CC altering their expression or activity) and therapeutically, e.g. in
CC cases of cancer or (targeting TGF) for stimulating the immune system.
XX
SQ Sequence 16 BP; 9 A; 2 C; 1 G; 4 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 16;
Best Local Similarity 92.9%; Pred. No. 4.9e+02;

Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1045 TATTTATGTATTTA 1058
||||| |||||||||
Db 16 TATTTGTGTATTTA 3

RESULT 752
AAS00453/c
ID AAS00453 standard; DNA; 16 BP.
XX
AC AAS00453;
XX
DT 15-MAY-2001 (first entry)
XX
DE Lactococcus lactis pyrG gene PCR primer SLLH6.
XX
KW PyrG; cytidine triphosphate synthetase; CTP; pyrimidine metabolism; UTP;
KW bacteriophage resistant; lactic acid bacterial culture; starter culture;
KW food industry; feed product; dairy product; fermentation process;
KW probiotic; PCR primer; ss.
XX
OS Lactococcus lactis subsp. cremoris MG1363.
XX
PN WO200114520-A2.
XX
PD 01-MAR-2001.
XX
PF 10-AUG-2000; 2000WO-DK00446.
XX
PR 19-AUG-1999; 99US-0377152.
XX
PA (CHRH-) CHR HANSEN AS.
XX
PI Wadskov-Hansen SLL, Hammer K, Martinussen J;
XX
DR WPI; 2001-218434/22.
XX
PT Obtaining a derivative of Lactococcus lactis subspecies cremoris having
PT reduced susceptibility to a bacteriophage, useful in food and feed
PT manufacturing, comprises mutating a gene involved in pyrimidine
PT metabolism of a parent bacterium -
XX
PS Example 1; Page 20; 70pp; English.
XX
CC The present sequence for Lactococcus lactis pyrG gene PCR primer SLLH6
CC is used in the PCR of Lactococcus lactis subspecies cremoris wild type
CC strain MG1363 pyrG gene. The pyrG gene encodes for cytidine triphosphate
CC (CTP) synthetase which is involved in pyrimidine metabolism by converting
CC UTP to CTP. The wild type CTP synthetase is used to construct
CC bacteriophage resistant lactic acid mutants (AAU00432-AAU00434) that have
CC a reduced susceptibility towards attack by at least one kind of
CC bacteriophage comprising subjecting a population of parent lactic acid
CC bacterial cells, which are initially susceptible towards bacteriophage
CC attack, to mutation in a gene involved in the pyrimidine metabolism. The
CC lactic acid bacterial cultures which have significantly reduced
CC susceptibility towards bacteriophage attacks are useful as starter
CC cultures in the manufacture of food and feed products, e.g. dairy
CC products and in other food fermentation processes. These may also be used
CC as probiotics, which when ingested by humans or animals in the form of
CC viable cells confers good health conditions, e.g. by suppressing harmful
CC microorganisms in the gastrointestinal tract, by enhancing the immune
CC system, or by contributing to the digestion of nutrients. Another strain
CC of L. lactis, MB383, is a leaky mutant for the pyrG gene (AAS00458) in
CC that these cells do not require cytidine for growth but have a reduced
CC susceptibility to bacteriophages.
XX
SQ Sequence 16 BP; 8 A; 2 C; 3 G; 3 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 16;
Best Local Similarity 92.9%; Pred. No. 4.9e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1626 TTTGTTGTCAAAGT 1639
||| ||||||||||
Db 14 TTTTTTGTCAAAGT 1

RESULT 753
ABL59924/c
ID ABL59924 standard; DNA; 16 BP.
XX
AC ABL59924;
XX
DT 22-JUL-2002 (first entry)
XX
DE Basho insertion RESite oligonucleotide #1.
XX
KW RESite; related to empty site; identification; transposon; genotyping;
KW nucleic acid database; DNA fingerprinting; genetic engineering; MITE;
KW miniature inverted-repeat transposable element; mapping; ss.
XX
OS Synthetic.
XX
PN WO200163540-A2.
XX
PD 30-AUG-2001.
XX
PF 26-FEB-2001; 2001WO-CA00251.
XX
PR 24-FEB-2000; 2000US-0184650.
XX
PA (UYMC-) UNIV MCGILL.
XX
PI Bureau T;
XX
DR WPI; 2001-565451/63.
XX
PT Determining a value indicating nucleic acid (NA) being a transposon
PT from NA database, by comparing target site NA and both leading and
PT trailing flanking region sequence between potential transposon and its
PT match -
XX
PS Disclosure; Fig 1B; 31pp; English.
XX
CC The present invention describes a method for determining a value
CC indicative of a nucleic acid (NA) sequence being a transposon (Tn), by
CC identifying the location in a NA database where a potential Tn (I) to be
CC identified may be found, selecting flanking region sequence (FRS) of (I),
CC searching the database for a match of the FRS, comparing a target site
CC NA sequence and both leading and trailing FRS between (I) and the match,
CC and determining value as result of previous step. The method can be used
CC for determining a value indicative of a NA sequence being a transposon.
CC The transposons identified by the method can be used to genotype a NA
CC sequence using PCR (polymerase chain reaction) or hybridisation based
CC protocols and sequences unique to the mined transposons. The transposons
CC can also be used in fingerprinting or linkage studies, isolation of novel
CC genes, producing mutated or knockout genes, and delivery of engineered
CC genes. A copia-like retro transposon, PDR1, is successfully used to study
CC polymorphisms. Miniature inverted-repeat transposable elements (MITEs)
CC are used in a novel technology called inter-MITE polymorphism as mapping
CC and fingerprinting tools in barley. The method is accurate, efficient,
CC and allows high throughput identification of transposons compared to the
CC use of standard genetic and molecular biological approaches. The
CC transposon sequences discovered by the method greatly outnumber all of
CC the plant transposon sequences previously reported. The present sequence
CC represents a Basho insertion RESite (related to empty site)
CC oligonucleotide, which is used in the exemplification of the present
CC invention.
XX
SQ Sequence 16 BP; 5 A; 2 C; 2 G; 7 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 16;
Best Local Similarity 92.9%; Pred. No. 4.9e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
        798 TTGCCATAAAGTCA 811
            ||| ||||||||||
         15 TTGACATAAAGTCA 2


SULT 754
L59944/c
   ABL59944 standard; DNA; 16 BP.

   ABL59944;

   22-JUL-2002  (first entry)

   Basho insertion RESite oligonucleotide #21.

   RESite; related to empty site; identification; transposon; genotyping;
   nucleic acid database; DNA fingerprinting; genetic engineering; MITE;
   miniature inverted-repeat transposable element; mapping; ss.

   Synthetic.

   WO200163540-A2.

   30-AUG-2001.

   26-FEB-2001; 2001WO-CA00251.

   24-FEB-2000; 2000US-0184650.

   (UYMC-) UNIV MCGILL.

   Bureau T;

   WPI; 2001-565451/63.

   Determining a value indicating nucleic acid (NA) being a transposon
   from NA database, by comparing target site NA and both leading and
   trailing flanking region sequence between potential transposon and its
   match  -

   Disclosure; Fig 1B; 31pp; English.

   The present invention describes a method for determining a value
   indicative of a nucleic acid (NA) sequence being a transposon (Tn), by
   identifying the location in a NA database where a potential Tn (I) to be
   identified may be found, selecting flanking region sequence (FRS) of (I),
   searching the database for a match of the FRS, comparing a target site
   NA sequence and both leading and trailing FRS between (I) and the match,
   and determining value as result of previous step. The method can be used
   for determining a value indicative of a NA sequence being a transposon.
   The transposons identified by the method can be used to genotype a NA
   sequence using PCR (polymerase chain reaction) or hybridisation based
   protocols and sequences unique to the mined transposons. The transposons
   can also be used in fingerprinting or linkage studies, isolation of novel
   genes, producing mutated or knockout genes, and delivery of engineered
   genes. A copia-like retro transposon, PDR1, is successfully used to study
   polymorphisms. Miniature inverted-repeat transposable elements (MITEs)
   are used in a novel technology called inter-MITE polymorphism as mapping
   and fingerprinting tools in barley. The method is accurate, efficient,
   and allows high throughput identification of transposons compared to the
   use of standard genetic and molecular biological approaches. The
   transposon sequences discovered by the method greatly outnumber all of
   the plant transposon sequences previously reported. The present sequence
   represents a Basho insertion RESite (related to empty site)
   oligonucleotide, which is used in the exemplification of the present
   invention.

   Sequence 16 BP; 8 A; 0 C; 2 G; 6 T; 0 other;

Query Match             1.0%;  Score 12.4;  DB 1;  Length 16;
Best Local Similarity   92.9%;  Pred. No. 4.9e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         995 TTTCATCATAACAT 1008
               ||||||||||| ||
Db          15 TTTCATCATAATAT 2


RESULT 755
AAK98508/c
ID   AAK98508 standard; DNA; 16 BP.
XX
AC   AAK98508;
XX
DT   16-APR-2002  (first entry)
XX
DE   Nucleic acid quantitative analysis probe #15.
XX
KW   Target detection; quantitative analysis; probe; medical diagnosis;
KW   forensics; bacterial screening; tissue typing; gene expression analysis;
KW   genotyping; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   16
FT                   /*tag=  a
FT                   /mod_base= OTHER
FT                   /note= "C-terminal amide"
XX
PN   WO200202810-A2.
XX
PD   10-JAN-2002.
XX
PF   02-JUL-2001; 2001WO-EP07575.
XX
PR   01-JUL-2000; 2000DE-1033334.
XX
PA   (CLON-) CLONDIAG CHIP TECHNOLOGIES GMBH.
XX
PI   Bickel R,  Ehricht R,  Ellinger T,  Ermantraut E,  Kaiser T,  Schulz T;
PI   Wagner G;
XX
DR   WPI; 2002-154760/20.
XX
PT   Determining targets by interaction with probe array, useful e.g. for
PT   diagnosis, based on detecting formation of precipitate at specific
PT   probe sites  -
XX
PS   Example 3; Page 38; 92pp; German.
XX
CC   The present invention relates to a method for the qualitative and
CC   quantitative detection of targets in a sample by molecular interaction
CC   between the target and probes in an array. The method can be used to
CC   detect interactions between nucleic acids, antigens and antibodies or
CC   receptor and ligands, particularly in applications such as medical
CC   diagnosis, forensic science, bacterial screening, tissue typing for
CC   transplantation, monitoring gene expression, and genotyping. The present
CC   sequence is a probe used in the exemplification of the invention.
XX
SQ   Sequence 16 BP; 4 A; 4 C; 4 G; 4 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 16;
  Best Local Similarity   92.9%;  Pred. No. 4.9e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         819 CTGGAAATCCTGGA 832
               | ||||||||||||
Db          14 CCGGAAATCCTGGA 1


RESULT 756
AAQ78890/c
ID   AAQ78890 standard; DNA; 17 BP.
XX
AC   AAQ78890;
```

```
X
F   25-MAR-2003  (updated)
F   18-DEC-1995  (first entry)
K
E   Humicola grisea glucoamylase hybridization probe.
K
W   Glucoamylase; DNA probe; gene cloning; protein secretion; ss.
K
S   Synthetic.
K
N   EP625577-A1.
K
D   23-NOV-1994.
K
F   27-AUG-1986;   94EP-0201751.
K
R   29-AUG-1985;   85US-0771374.
R   07-JUL-1986;   86US-0882224.
R   27-AUG-1986;   86EP-0306624.
X
A   (GEMV ) GENENCOR INT INC.
X
I   Berka RM,  Cullen D,  Gray GL,  Hayenga KJ,  Lawlis VB;
X
R   WPI; 1994-359750/45.
X
T   Vectors and DNA for expressing polypeptide(s) in filamentous fungi
T   - include secretory signal sequences that are native or foreign to
T   heterologous polypeptide(s), such as chymosin or glucoamylase.
X
S   Example 9A3; Page 22; 50pp; English.
X
C   The DNA probe and corresponding probes covering the degenerate
C   sites (AAQ78885-Q78891) correspond to amino acids 17-22 of the
C   H. grisea glucoamylase peptide GA1 (AAR62933), and are used as
C   hybridization probes to detect and isolate H. grisea glucoamylase
C   DNA in a Southern blot.  Resulting genomic DNA fragments are
C   excised and cloned in plasmid pRSH1.  This illustrates the main
C   claims of the patent, i.e. a vector containing (i) DNA encoding
C   a heterologous polypeptide (chymosin, prochymosin, preprochymosin,
C   Aspergillus niger glucoamylase, H. grisea glucoamylase, or Mucor
C   miehei carboxyl protease) and (ii) a secretory signal peptide,
C   and a filamentous fungus (Aspergillus, Trichoderma, Neurospora,
C   Podospora, Endothia, Mucor, Cochiobolus or Pyriclaria, especially
C   A. nidulans, A. awamori or T. reesei) transformed with the vector
C   for recombinant protein (enzyme) production.
C   (Updated on 25-MAR-2003 to correct PF field.)
C   (Updated on 25-MAR-2003 to correct PR field.)
X
Q   Sequence 17 BP; 11 A; 1 C; 0 G; 4 T; 1 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTT 1536
              ||||||| |||| :||
Db         17 TTTATATATTTATMTT 2


RESULT 757
AAX63796/c
ID   AAX63796 standard; RNA; 17 BP.
XX
AC   AAX63796;
XX
DT   20-JUL-1999  (first entry)
XX
DE   Rabbit stromelysin hammerhead target SEQ ID NO:428.
XX
KW   Arthritic condition; graft tolerance; immune response; target; cleavage;
KW   hammerhead ribozyme; hairpin ribozyme; human; rabbit; mouse; collagenase;
KW   stromelysin; synovial membrane; joint; arthritis; osteoarthritis;
KW   rheumatoid arthritis; autoimmune disease; allergy; inflammation;
KW   diagnosis; ss.
XX
OS   Oryctolagus cuniculus.
XX
PN   WO9618736-A2.
XX
PD   20-JUN-1996.
XX
PF   22-NOV-1995;   95WO-US15516.
XX
PR   05-OCT-1995;   95US-0541365.
PR   13-DEC-1994;   94US-0354920.
PR   23-DEC-1994;   94US-0363253.
PR   23-DEC-1994;   94US-0363254.
PR   17-FEB-1995;   95US-0390850.
PR   20-APR-1995;   95US-0426124.
PR   02-MAY-1995;   95US-0432874.
PR   04-MAY-1995;   95US-0434509.
PR   07-JUL-1995;   95US-0000951.
PR   07-JUL-1995;   95US-0000974.
PR   07-AUG-1995;   95US-0512861.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Draper K,  Gustofson J,  McSwiggen J,  Pavco P,  Stinchcomb DT;
PI   Beigelman L,  Karpeisky A,  Modak A,  Usman N,  Burgin A;
PI   Matulic-Adamic J,  Jarvis T,  Thompson JD,  Wincott F;
XX
DR   WPI; 1996-300653/30.
XX
PT   Enzymatic nucleic acid molecules having a hammer-head motif - used
PT   for the treatment of arthritis, induction of graft tolerance or
PT   treatment of auto-immune diseases
XX
PS   Example 1; Page 153; 307pp; English.
XX
CC   The present invention describes a novel enzymatic nucleic acid (ENA)
CC   having a hammerhead motif (HM) comprising: (i) at least 5 ribose
CC   residues; (ii) a 2'-C-allyl modification at position 4 of the ENA; (iii)
CC   at least ten 2'-O-methyl modifications; and (iv) a 3'-end modification.
CC   The ENA's can inhibit collagenase and stromelysin production in the
CC   synovial membrane of joints for the treatment or prevention of arthritis,
CC   particularly osteoarthritis or rheumatoid arthritis. The ENA's can also
CC   be used to treat antigen presenting cells of a donor to induce tolerance
CC   in a recipient to an alloantigen of a donor. They can also be used for
CC   enhancing graft tolerance or for treating autoimmune disease, and for
CC   treating allergies and other inflammatory conditions. The ENA's can also
CC   be used in diagnosis. Ribozyme therapy impacts on the expression of
CC   stromelysin without introducing the non-specific effects upon gene
CC   expression which accompany treatment with retinoids and dexamethasone.
CC   The concentration of ribozyme required to affect a therapeutic treatment
CC   is lower than that required of antisense molecules, and is highly
CC   specific. The present sequence is used in the exemplification of the
CC   present invention.
XX
SQ   Sequence 17 BP; 12 A; 2 C; 1 G; 2 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        826 TCCTGGATTTTTTT 839
              || |||||||||||
Db         14 TCTTGGATTTTTTT 1


RESULT 758
AAX75067/c
ID   AAX75067 standard; RNA; 17 BP.
XX
AC   AAX75067;
XX
```

```
   28-JUL-1999  (first entry)

   Mouse flt-1 VEGF receptor hammerhead ribozyme substrate #595.

   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
   foetal liver kinase 1; ss.

   Mus sp.

   WO9715662-A2.

   01-MAY-1997.

   25-OCT-1996;   96WO-US17480.

   11-JAN-1996;   96US-0584040.
   26-OCT-1995;   95US-0005974.

   (CHIR ) CHIRON CORP.
   (RIBO-) RIBOZYME PHARM INC.

   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;

   WPI; 1997-259017/23.

   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
   mRNA stability  - useful for treating e.g. tumour angiogenesis,
   psoriasis, rheumatoid arthritis, etc., in a human patient

   Claim 4; Page 173; 218pp; English.

   The present invention describes nucleic acid molecules which modulate
   the synthesis, expression and/or stability of a mRNA encoding 1 or more
   receptors of vascular endothelial growth factor (VEGF). A patient
   (preferably human) having a condition associated with the level of the
   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
   be treated by administering the nucleic acid molecule or the expression
   vector to the patient. AAX67275 to AAX75752 represent specific examples
   of nucleic acid molecules from the present invention.

   Sequence 17 BP; 0 A; 1 C; 3 G; 13 U; 0 other;

Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

        617 CAAAAAACAACAAA 630
            ||||||||||| |||
         17 CAAAAAACAAAAAA 4


SULT 759
X75069/c
   AAX75069 standard; RNA; 17 BP.

   AAX75069;

   28-JUL-1999  (first entry)

   Mouse flt-1 VEGF receptor hammerhead ribozyme substrate #597.

   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
   foetal liver kinase 1; ss.

   Mus sp.

   XX
   PN   WO9715662-A2.
   XX
   PD   01-MAY-1997.
   XX
   PF   25-OCT-1996;   96WO-US17480.
   XX
   PR   11-JAN-1996;   96US-0584040.
   PR   26-OCT-1995;   95US-0005974.
   XX
   PA   (CHIR ) CHIRON CORP.
   PA   (RIBO-) RIBOZYME PHARM INC.
   XX
   PI   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;
   XX
   DR   WPI; 1997-259017/23.
   XX
   PT   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
   PT   mRNA stability  - useful for treating e.g. tumour angiogenesis,
   PT   psoriasis, rheumatoid arthritis, etc., in a human patient
   XX
   PS   Claim 4; Page 173; 218pp; English.
   XX
   CC   The present invention describes nucleic acid molecules which modulate
   CC   the synthesis, expression and/or stability of a mRNA encoding 1 or more
   CC   receptors of vascular endothelial growth factor (VEGF). A patient
   CC   (preferably human) having a condition associated with the level of the
   CC   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
   CC   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
   CC   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
   CC   be treated by administering the nucleic acid molecule or the expression
   CC   vector to the patient. AAX67275 to AAX75752 represent specific examples
   CC   of nucleic acid molecules from the present invention.
   XX
   SQ   Sequence 17 BP; 0 A; 0 C; 2 G; 15 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        616 ACAAAAAACAACAA 629
              ||||||||||| ||
Db         14 ACAAAAAACAAAAA 1


RESULT 760
AAX74782
ID   AAX74782 standard; RNA; 17 BP.
XX
AC   AAX74782;
XX
DT   28-JUL-1999  (first entry)
XX
DE   Mouse flt-1 VEGF receptor hammerhead ribozyme substrate #310.
XX
KW   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
KW   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
KW   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
KW   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
KW   foetal liver kinase 1; ss.
XX
OS   Mus sp.
XX
PN   WO9715662-A2.
XX
PD   01-MAY-1997.
XX
PF   25-OCT-1996;   96WO-US17480.
XX
PR   11-JAN-1996;   96US-0584040.
PR   26-OCT-1995;   95US-0005974.
XX
PA   (CHIR ) CHIRON CORP.
```

```
A   (RIBO-) RIBOZYME PHARM INC.
X
I   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;
K
R   WPI; 1997-259017/23.
K
T   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
T   mRNA stability  - useful for treating e.g. tumour angiogenesis,
T   psoriasis, rheumatoid arthritis, etc., in a human patient
K
S   Claim 4; Page 164; 218pp; English.
K
C   The present invention describes nucleic acid molecules which modulate
C   the synthesis, expression and/or stability of a mRNA encoding 1 or more
C   receptors of vascular endothelial growth factor (VEGF). A patient
C   (preferably human) having a condition associated with the level of the
C   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
C   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
C   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
C   be treated by administering the nucleic acid molecule or the expression
C   vector to the patient. AAX67275 to AAX75752 represent specific examples
C   of nucleic acid molecules from the present invention.
K
Q   Sequence 17 BP; 11 A; 4 C; 1 G; 1 U; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
 Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y        616 ACAAAAAACAACAA 629
             |||||| |||||||
b          2 ACAAAAUACAACAA 15


ESULT 761
AX72896/c
D   AAX72896 standard; RNA; 17 BP.
X
C   AAX72896;
X
T   28-JUL-1999  (first entry)
X
E   Mouse flk-1 VEGF receptor hammerhead ribozyme substrate #329.
X
W   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
W   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
W   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
W   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
W   foetal liver kinase 1; ss.
X
S   Mus sp.
X
N   WO9715662-A2.
X
D   01-MAY-1997.
X
F   25-OCT-1996;   96WO-US17480.
X
R   11-JAN-1996;   96US-0584040.
R   26-OCT-1995;   95US-0005974.
X
A   (CHIR ) CHIRON CORP.
A   (RIBO-) RIBOZYME PHARM INC.
X
I   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;
X
R   WPI; 1997-259017/23.
X
T   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
T   mRNA stability  - useful for treating e.g. tumour angiogenesis,
T   psoriasis, rheumatoid arthritis, etc., in a human patient
X
S   Claim 4; Page 133; 218pp; English.
X
C   The present invention describes nucleic acid molecules which modulate
C   the synthesis, expression and/or stability of a mRNA encoding 1 or more
C   receptors of vascular endothelial growth factor (VEGF). A patient
C   (preferably human) having a condition associated with the level of the
C   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
C   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
C   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
C   be treated by administering the nucleic acid molecule or the expression
C   vector to the patient. AAX67275 to AAX75752 represent specific examples
C   of nucleic acid molecules from the present invention.
X
SQ   Sequence 17 BP; 5 A; 5 C; 2 G; 5 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        467 CATGTATTGTGTGG 480
              |||||| |||||||
Db         14 CATGTAATGTGTGG 1


RESULT 762
AAX71477
ID   AAX71477 standard; RNA; 17 BP.
XX
AC   AAX71477;
XX
DT   28-JUL-1999  (first entry)
XX
DE   Human KDR VEGF receptor hammerhead ribozyme substrate #489.
XX
KW   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
KW   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
KW   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
KW   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
KW   foetal liver kinase 1; ss.
XX
OS   Homo sapiens.
XX
PN   WO9715662-A2.
XX
PD   01-MAY-1997.
XX
PF   25-OCT-1996;   96WO-US17480.
XX
PR   11-JAN-1996;   96US-0584040.
PR   26-OCT-1995;   95US-0005974.
XX
PA   (CHIR ) CHIRON CORP.
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;
XX
DR   WPI; 1997-259017/23.
XX
PT   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
PT   mRNA stability  - useful for treating e.g. tumour angiogenesis,
PT   psoriasis, rheumatoid arthritis, etc., in a human patient
XX
PS   Claim 4; Page 111; 218pp; English.
XX
CC   The present invention describes nucleic acid molecules which modulate
CC   the synthesis, expression and/or stability of a mRNA encoding 1 or more
CC   receptors of vascular endothelial growth factor (VEGF). A patient
CC   (preferably human) having a condition associated with the level of the
CC   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
CC   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
CC   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
CC   be treated by administering the nucleic acid molecule or the expression
CC   vector to the patient. AAX67275 to AAX75752 represent specific examples
CC   of nucleic acid molecules from the present invention.
```

Sequence 17 BP; 8 A; 2 C; 1 G; 6 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 57.1%; Pred. No. 5.1e+02;
Matches 8; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

```
       1118 ATAGTTATAAAGAT 1131
            |:| ::|:|||||:
          1 AUAUUUAUAAAGAU 14
```

SULT 763
X71099
AAX71099 standard; RNA; 17 BP.

AAX71099;

28-JUL-1999 (first entry)

Human KDR VEGF receptor hammerhead ribozyme substrate #111.

Vascular endothelial growth factor receptor; VEGF receptor; flt-1; flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage; tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease; fms-like tyrosine kinase 1; kinase insert domain containing receptor; foetal liver kinase 1; ss.

Homo sapiens.

WO9715662-A2.

01-MAY-1997.

25-OCT-1996; 96WO-US17480.

11-JAN-1996; 96US-0584040.
26-OCT-1995; 95US-0005974.

(CHIR) CHIRON CORP.
(RIBO-) RIBOZYME PHARM INC.

Escobedo J, McSwiggen J, Pavco P, Stinchcomb D;

WPI; 1997-259017/23.

Nucleic acid molecule modulating VEGF receptor(s) gene expression or mRNA stability - useful for treating e.g. tumour angiogenesis, psoriasis, rheumatoid arthritis, etc., in a human patient

Claim 4; Page 100; 218pp; English.

The present invention describes nucleic acid molecules which modulate the synthesis, expression and/or stability of a mRNA encoding 1 or more receptors of vascular endothelial growth factor (VEGF). A patient (preferably human) having a condition associated with the level of the fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can be treated by administering the nucleic acid molecule or the expression vector to the patient. AAX67275 to AAX75752 represent specific examples of nucleic acid molecules from the present invention.

Sequence 17 BP; 5 A; 3 C; 2 G; 7 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 50.0%; Pred. No. 5.1e+02;
Matches 7; Conservative 6; Mismatches 1; Indels 0; Gaps 0;

```
       1457 GTTTATTATGTACA 1470
            |: :|::|:|:|||
          3 GUCUAUUAUGUACA 16
```

RESULT 764
AAX69623
ID AAX69623 standard; RNA; 17 BP.
XX
AC AAX69623;
XX
DT 28-JUL-1999 (first entry)
XX
DE Human flt1 VEGF receptor hammerhead ribozyme substrate #918.
XX
KW Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
KW flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
KW tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
KW fms-like tyrosine kinase 1; kinase insert domain containing receptor;
KW foetal liver kinase 1; ss.
XX
OS Homo sapiens.
XX
PN WO9715662-A2.
XX
PD 01-MAY-1997.
XX
PF 25-OCT-1996; 96WO-US17480.
XX
PR 11-JAN-1996; 96US-0584040.
PR 26-OCT-1995; 95US-0005974.
XX
PA (CHIR) CHIRON CORP.
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Escobedo J, McSwiggen J, Pavco P, Stinchcomb D;
XX
DR WPI; 1997-259017/23.
XX
PT Nucleic acid molecule modulating VEGF receptor(s) gene expression or
PT mRNA stability - useful for treating e.g. tumour angiogenesis,
PT psoriasis, rheumatoid arthritis, etc., in a human patient
XX
PS Claim 4; Page 74; 218pp; English.
XX
CC The present invention describes nucleic acid molecules which modulate
CC the synthesis, expression and/or stability of a mRNA encoding 1 or more
CC receptors of vascular endothelial growth factor (VEGF). A patient
CC (preferably human) having a condition associated with the level of the
CC fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
CC receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
CC angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
CC be treated by administering the nucleic acid molecule or the expression
CC vector to the patient. AAX67275 to AAX75752 represent specific examples
CC of nucleic acid molecules from the present invention.
XX
SQ Sequence 17 BP; 5 A; 5 C; 2 G; 5 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 64.3%; Pred. No. 5.1e+02;
Matches 9; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

```
Qy          980 AAGCACTTTAAGTT 993
                ||||||:::||| :
Db            2 AAGCACUUUAAGCU 15
```

RESULT 765
AAX69624
ID AAX69624 standard; RNA; 17 BP.
XX
AC AAX69624;
XX
DT 28-JUL-1999 (first entry)
XX
DE Human flt1 VEGF receptor hammerhead ribozyme substrate #919.
XX

```
W   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
W   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
W   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
W   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
W   foetal liver kinase 1; ss.
(
S   Homo sapiens.
(
R   WO9715662-A2.
(
D   01-MAY-1997.
(
F   25-OCT-1996;   96WO-US17480.
(
R   11-JAN-1996;   96US-0584040.
R   26-OCT-1995;   95US-0005974.
(
A   (CHIR ) CHIRON CORP.
A   (RIBO-) RIBOZYME PHARM INC.
(
I   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;
(
R   WPI; 1997-259017/23.
(
T   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
T   mRNA stability  - useful for treating e.g. tumour angiogenesis,
T   psoriasis, rheumatoid arthritis, etc., in a human patient
X
S   Claim 4; Page 74; 218pp; English.
X
C   The present invention describes nucleic acid molecules which modulate
C   the synthesis, expression and/or stability of a mRNA encoding 1 or more
C   receptors of vascular endothelial growth factor (VEGF). A patient
C   (preferably human) having a condition associated with the level of the
C   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
C   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
C   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
C   be treated by administering the nucleic acid molecule or the expression
C   vector to the patient. AAX67275 to AAX75752 represent specific examples
C   of nucleic acid molecules from the present invention.
X
Q   Sequence 17 BP; 5 A; 5 C; 2 G; 5 U; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
 Best Local Similarity   64.3%;  Pred. No. 5.1e+02;
 Matches    9;  Conservative    4;  Mismatches    1;  Indels    0;  Gaps    0;

y        980 AAGCACTTTAAGTT 993
             ||||||:::||| :
b          1 AAGCACUUUAAGCU 14


ESULT 766
AX69328
D   AAX69328 standard; RNA; 17 BP.
X
C   AAX69328;
X
T   28-JUL-1999  (first entry)
X
E   Human flt1 VEGF receptor hammerhead ribozyme substrate #623.
X
W   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
W   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
W   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
W   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
W   foetal liver kinase 1; ss.
X
S   Homo sapiens.
X
N   WO9715662-A2.
X
D   01-MAY-1997.
X
F   25-OCT-1996;   96WO-US17480.
X
R   11-JAN-1996;   96US-0584040.
R   26-OCT-1995;   95US-0005974.
X
A   (CHIR ) CHIRON CORP.
A   (RIBO-) RIBOZYME PHARM INC.
X
I   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;
X
R   WPI; 1997-259017/23.
X
T   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
T   mRNA stability  - useful for treating e.g. tumour angiogenesis,
T   psoriasis, rheumatoid arthritis, etc., in a human patient
X
S   Claim 4; Page 65; 218pp; English.
X
C   The present invention describes nucleic acid molecules which modulate
C   the synthesis, expression and/or stability of a mRNA encoding 1 or more
C   receptors of vascular endothelial growth factor (VEGF). A patient
C   (preferably human) having a condition associated with the level of the
C   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
C   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
C   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
C   be treated by administering the nucleic acid molecule or the expression
C   vector to the patient. AAX67275 to AAX75752 represent specific examples
C   of nucleic acid molecules from the present invention.
X
Q   Sequence 17 BP; 5 A; 3 C; 3 G; 6 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   50.0%;  Pred. No. 5.1e+02;
  Matches    7;  Conservative    6;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        714 TCCGAACTTTAATT 727
              :||||| :::||::
Db          1 UCCGAAGUUUAAUU 14


RESULT 767
AAX69088
ID   AAX69088 standard; RNA; 17 BP.
X
AC   AAX69088;
X
DT   28-JUL-1999  (first entry)
X
DE   Human flt1 VEGF receptor hammerhead ribozyme substrate #383.
X
KW   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
KW   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
KW   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
KW   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
KW   foetal liver kinase 1; ss.
XX
OS   Homo sapiens.
XX
PN   WO9715662-A2.
XX
PD   01-MAY-1997.
XX
PF   25-OCT-1996;   96WO-US17480.
XX
PR   11-JAN-1996;   96US-0584040.
PR   26-OCT-1995;   95US-0005974.
XX
PA   (CHIR ) CHIRON CORP.
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;
XX
```

WPI; 1997-259017/23.

Nucleic acid molecule modulating VEGF receptor(s) gene expression or mRNA stability - useful for treating e.g. tumour angiogenesis, psoriasis, rheumatoid arthritis, etc., in a human patient

Claim 4; Page 58; 218pp; English.

The present invention describes nucleic acid molecules which modulate the synthesis, expression and/or stability of a mRNA encoding 1 or more receptors of vascular endothelial growth factor (VEGF). A patient (preferably human) having a condition associated with the level of the fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can be treated by administering the nucleic acid molecule or the expression vector to the patient. AAX67275 to AAX75752 represent specific examples of nucleic acid molecules from the present invention.

Sequence 17 BP; 11 A; 4 C; 1 G; 1 U; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

        616 ACAAAAAACAACAA 629
            |||||| |||||||
          2 ACAAAAUACAACAA 15
```

SULT 768
V97418
AAV97418 standard; RNA; 17 BP.

AAV97418;

17-MAR-1999 (first entry)

Human EGF-R target sequence nucleotide position 1577.

Human; epidermal growth factor receptor; EGFR; EGF-R; target sequence; hammerhead ribozyme; hairpin ribozyme; inhibition; cell proliferation; cancer; genetic drift; detection; mutation; ss.

Homo sapiens.

WO9833893-A2.

06-AUG-1998.

14-JAN-1998; 98WO-US00730.

04-DEC-1997; 97US-0985162.
31-JAN-1997; 97US-0036476.

(RIBO-) RIBOZYME PHARM INC.
(UYAS-) UNIV ASTON.

Akhtar S, Fell P, McSwiggen JA;

WPI; 1998-437449/37.

Enzymatic nucleic acids - which cleave RNA derived from an epidermal growth factor receptor, useful for inhibiting cell proliferation and for treating cancers

Claim 5; Page 72; 109pp; English.

The present invention describes enzymatic nucleic acid molecules (NAMs) which specifically cleave RNA derived from an epidermal growth factor receptor (EGF-R) gene. AAV97221 to AAV98043 and AAV98979 to AAV99090 represent specifically claimed target sequence from human EGF-R. AAV98044 to AAV98866 and AAV98867 to V9878 represent hammerhead ribozymes and hairpin ribozymes respectively for human EGF-R. The NAMs are useful for cleaving EGF-R RNA in the treatment of a condition associated with EGFR expression levels e.g. to inhibit cell proliferation in the prevention or treatment of cancers. The NAMs can also be used as diagnostic tools to examine genetic drift and mutations within diseased cells or to detect the presence of EGF-R RNA in a cell.

Sequence 17 BP; 8 A; 2 C; 3 G; 4 U; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   71.4%;  Pred. No. 5.1e+02;
Matches   10;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        530 AATTTCAGTAAACA 543
              ||:::||| |||||
Db          4 AAUUUCAGGAAACA 17
```

RESULT 769
AAV95855/c
AAV95855 standard; RNA; 17 BP.

AAV95855;

01-MAR-1999 (first entry)

Solanidine glucosyltransferase target sequence position 960.

Solanidine; glucosyltransferase; potato; citrate synthase; target; hammerhead ribozyme; hairpin ribozyme; alkaloid biosynthesis; flower formation; cleavage; solanaceous plant; ss.

Solanum tuberosum.

WO9832843-A2.

30-JUL-1998.

14-JAN-1998; 98WO-US00738.

24-NOV-1997; 97US-0979416.
28-JAN-1997; 97US-0036545.
28-JAN-1997; 97US-0036599.

(RIBO-) RIBOZYME PHARM INC.

McSwiggen JA, Zwick MG;

WPI; 1998-427939/36.

New enzymatic nucleic acid(s) - useful for, e.g. reducing alkaloid biosynthesis or regulating flowering

Claim 13; Page 49; 79pp; English.

The present invention describes enzymatic nucleic acid molecules with RNA-cleaving activity (e.g. ribozymes) which are capable of modulating the expression of plant genes: (i) involved in biosynthesis of alkaloids; or (ii) involved in flower formation. AAV95982 to AAV96334, and AAV96335 to AAV96354 represent potato solanidine glucosyltransferase hammerhead and hairpin ribozymes, respectively. AAV95629 to AAV95981, and AAV96355 to AAV96734 represent potato solanidine glucosyltransferase target sequences. AAV96773 to AAV97170, and AAV97171 to AAV97195 represent potato citrate synthase hammerhead and hairpin ribozymes, respectively. AAV96735 to AAV96772, and AAV97196 to AAV97220 represent potato citrate synthase target sequences. Ribozymes of the present invention can be used to inhibit the synthesis of toxic alkaloids in solanaceous plants, particularly potato but also tomato, pepper, aubergine and ditura or to inhibit flowering in potato, lettuce, spinach, cabbage, brussel sprouts, arugula, kale, collards, chard, beet, turnip, sweet potato and turf grass. Also the ribozymes can be used for RNA manipulation in the same way that restriction endonucleases are for DNA, as well as to examine genetic drift and mutations in plants and to

```
C   detect specific RNA. The  ribozymes can be targeted to specific genes or
C   to consensus sequences  within a family of related genes, and being
C   catalytic need to be  present at only very low concentrations.
X
Q   Sequence 17 BP; 4 A; 2 C; 4 G; 7 U; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
 Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        758 ATATTTGAAGCATC 771
              | ||||||||||||
Db         16 ACATTTGAAGCATC 3


ESULT 770
AV95856/c
D   AAV95856 standard; RNA; 17 BP.
X
C   AAV95856;
X
T   01-MAR-1999  (first entry)
X
E   Solanidine glucosyltransferase target sequence position 961.
X
W   Solanidine; glucosyltransferase; potato; citrate synthase; target;
W   hammerhead ribozyme; hairpin ribozyme; alkaloid biosynthesis;
W   flower formation; cleavage; solanaceous plant; ss.
X
S   Solanum tuberosum.
X
N   WO9832843-A2.
X
D   30-JUL-1998.
X
F   14-JAN-1998;   98WO-US00738.
X
R   24-NOV-1997;   97US-0979416.
R   28-JAN-1997;   97US-0036545.
R   28-JAN-1997;   97US-0036599.
X
A   (RIBO-) RIBOZYME PHARM INC.
X
I   McSwiggen JA,  Zwick MG;
X
R   WPI; 1998-427939/36.
X
T   New enzymatic nucleic acid(s) - useful for, e.g. reducing alkaloid
T   biosynthesis or regulating flowering
X
S   Claim 13; Page 49; 79pp; English.
X
C   The present invention describes enzymatic nucleic acid molecules with
C   RNA-cleaving activity (e.g. ribozymes) which are capable of modulating
C   the expression of plant genes: (i) involved in biosynthesis of
C   alkaloids; or (ii) involved in flower formation. AAV95982 to AAV96334,
C   and AAV96335 to AAV96354 represent potato solanidine glucosyltransferase
C   hammerhead and hairpin ribozymes, respectively. AAV95629 to AAV95981,
C   and AAV96355 to AAV96734 represent potato solanidine glucosyltransferase
C   target sequences. AAV96773 to AAV97170, and AAV97171 to AAV97195
C   represent potato citrate synthase hammerhead and hairpin ribozymes,
C   respectively. AAV96735 to AAV96772, and AAV97196 to AAV97220 represent
C   potato citrate synthase target sequences. Ribozymes of the present
C   invention can be used to inhibit the synthesis of toxic alkaloids in
C   solanaceous plants, particularly potato but also tomato, pepper,
C   aubergine and ditura or to inhibit flowering in potato, lettuce, spinach,
C   cabbage, brussel sprouts, arugula, kale, collards, chard, beet, turnip,
C   sweet potato and turf grass. Also the ribozymes can be used for RNA
C   manipulation in the same way that restriction endonucleases are for DNA,
C   as well as to examine  genetic drift and mutations in plants and to
C   detect specific RNA. The  ribozymes can be targeted to specific genes or
C   to consensus sequences  within a family of related genes, and being
C   catalytic need to be  present at only very low concentrations.
XX
SQ   Sequence 17 BP; 4 A; 3 C; 4 G; 6 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        758 ATATTTGAAGCATC 771
              | ||||||||||||
Db         15 ACATTTGAAGCATC 2


RESULT 771
AAV58890/c
ID   AAV58890 standard; DNA; 17 BP.
XX
AC   AAV58890;
XX
DT   20-JAN-1999  (first entry)
XX
DE   Primer C5 for Cytochrome C551 I coding sequence.
XX
KW   Cytochrome C551; vitamin C production; electron transfer mediator;
KW   aldehyde production; ketone production; carboxylic acid production;
KW   alcohol dehydrogenase; aldehyde dehydrogenase; PCR primer; ss.
XX
OS   Synthetic.
OS   Gluconobacter oxydans.
XX
PN   EP869175-A2.
XX
PD   07-OCT-1998.
XX
PF   27-MAR-1998;   98EP-0105608.
XX
PR   04-APR-1997;   97EP-0105583.
XX
PA   (HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX
PI   Asakura A,  Hoshino T,  Shinjoh M,  Tomiyama N;
XX
DR   WPI; 1998-508491/44.
XX
PT   New Gluconobacter cytochrome c551 polypeptides I and II - useful as
PT   electron transfer mediators and especially for producing vitamin C
XX
PS   Example 2; Fig 2; 22pp; English.
XX
CC   This sequence is a primer for DNA encoding the Gluconobacter cytochrome
CC   C551 I of the invention. The cytochrome C551 I protein has: (a) a
CC   molecular weight of 17-20kDA; (b) an absorption spectrum (for reduced
CC   form) with alpha, beta and gamma peaks at 551, 522 and 417 nm
CC   respectively; (c) a haem content of about 1 mole/mole protein; and (d) an
CC   isoelectric point of about 3.95. The novel cytochrome c is especially
CC   useful for producing vitamin C, as it is an electron transfer mediator
CC   which improves production of aldehydes, ketones and carboxylic acids from
CC   corresponding substrates in the presence of alcohol dehydrogenase and
CC   aldehyde dehydrogenase enzymes (AADH). It especially improves production
CC   of 2-KGA (an intermediate of vitamin C) from L-sorbose or D-sorbose. It
CC   can also be used as a source for protein-protein conjugates such as
CC   AADH-cytochrome c551 to improve total electron transfer efficiency.
XX
SQ   Sequence 17 BP; 8 A; 1 C; 1 G; 2 T; 5 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   68.8%;  Pred. No. 5.1e+02;
  Matches   11;  Conservative    4;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1036 CCTATTTATTATTTAT 1051
              | ||:||:||:||:||
Db         16 CRTAYTTRTTRTTDAT 1
```

SULT 772
AV58891
) AAV58891 standard; DNA; 17 BP.
{
: AAV58891;
:
: 20-JAN-1999 (first entry)
:
: Primer C5R for Cytochrome C551 I coding sequence.
:
: Cytochrome C551; vitamin C production; electron transfer mediator;
: aldehyde production; ketone production; carboxylic acid production;
: alcohol dehydrogenase; aldehyde dehydrogenase; PCR primer; ss.
:
: Synthetic.
: Gluconobacter oxydans.
:
: EP869175-A2.
:
: 07-OCT-1998.
:
: 27-MAR-1998; 98EP-0105608.
:
: 04-APR-1997; 97EP-0105583.
:
: (HOFF) HOFFMANN LA ROCHE & CO AG F.
:
: Asakura A, Hoshino T, Shinjoh M, Tomiyama N;
:
: WPI; 1998-508491/44.
:
: New Gluconobacter cytochrome c551 polypeptides I and II - useful as
: electron transfer mediators and especially for producing vitamin C
:
: Example 2; Fig 2; 22pp; English.
:
: This sequence is a primer for DNA encoding the Gluconobacter cytochrome
: C551 I of the invention. The cytochrome C551 I protein has: (a) a
: molecular weight of 17-20kDA; (b) an absorption spectrum (for reduced
: form) with alpha, beta and gamma peaks at 551, 522 and 417 nm
: respectively; (c) a haem content of about 1 mole/mole protein; and (d) an
: isoelectric point of about 3.95. The novel cytochrome c is especially
: useful for producing vitamin C, as it is an electron transfer mediator
: which improves production of aldehydes, ketones and carboxylic acids from
: corresponding substrates in the presence of alcohol dehydrogenase and
: aldehyde dehydrogenase enzymes (AADH). It especially improves production
: of 2-KGA (an intermediate of vitamin C) from L-sorbose or D-sorbose. It
: can also be used as a source for protein-protein conjugates such as
: AADH-cytochrome c551 to improve total electron transfer efficiency.
:
) Sequence 17 BP; 2 A; 1 C; 1 G; 8 T; 5 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 68.8%; Pred. No. 5.1e+02;
Matches 11; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

1036 CCTATTTATTATTTAT 1051
| ||:||:||:||:||
2 CRTAYTTRTTRTTDAT 17

SULT 773
AA17432
) AAA17432 standard; RNA; 17 BP.
{
: AAA17432;
:
: 19-JUN-2000 (first entry)
:
: Aryl hydrocarbon nuclear transport substrate sequence SEQ ID NO:658.
:
) Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
; integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX
PR 27-MAR-1998; 98US-0079678.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -
XX
PS Claim 53; Page 79; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC and AAA19155 to AAA19222 represent their corresponding target sequences;
CC AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC AAA21596 to AAA21688 represent their corresponding target sequences;
CC AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC AAA23422 represent their corresponding target sequences. The ribozymes of
CC the invention are used for modulating the synthesis, expression and/or
CC stability of an mRNA encoding angiogenic factor, especially ARNT,
CC integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ Sequence 17 BP; 7 A; 1 C; 5 G; 4 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 64.3%; Pred. No. 5.1e+02;
Matches 9; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 724 AATTTCAGGAATTG 737
||:::||||||: |
Db 4 AAUUUCAGGAAUAG 17

RESULT 774
AAA20578
ID AAA20578 standard; RNA; 17 BP.
XX
AC AAA20578;
XX
DT 19-JUN-2000 (first entry)

```
XX
DE   Integrin alpha 6 subunit substrate sequence SEQ ID NO:3804.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors -
XX
PS   Claim 55; Page 154; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 4 A; 2 C; 2 G; 9 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   28.6%;  Pred. No. 5.1e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1149 TTATTTTAGATATT 1162
              ::|:::: ||:|::
Db          4 UUAUUUUGGAUAUU 17


RESULT 775
AAA20579
ID   AAA20579 standard; RNA; 17 BP.
XX
AC   AAA20579;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin alpha 6 subunit substrate sequence SEQ ID NO:3805.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors -
XX
PS   Claim 55; Page 154; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 3 A; 3 C; 2 G; 9 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   28.6%;  Pred. No. 5.1e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1149 TTATTTTAGATATT 1162
              ::|:::: ||:|::
```

```
Db          3 UUAUUUUGGAUAUU 16

RESULT 776
AAA21204
ID   AAA21204 standard; RNA; 17 BP.
XX
AC   AAA21204;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin alpha 6 subunit substrate sequence SEQ ID NO:4430.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;  99WO-US06507.
XX
PR   27-MAR-1998;  98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors -
XX
PS   Claim 55; Page 193; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 3 A; 1 C; 2 G; 11 U; 0 other;

Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   28.6%;  Pred. No. 5.1e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1524 ATATTTTTAACTTT 1537
              |:|::::: ||:::
Db          4 AUAUUUUUUACUUU 17


RESULT 777
AAA21208
ID   AAA21208 standard; RNA; 17 BP.
XX
AC   AAA21208;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin alpha 6 subunit substrate sequence SEQ ID NO:4434.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;  99WO-US06507.
XX
PR   27-MAR-1998;  98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors -
XX
PS   Claim 55; Page 193; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
```

```
XC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 5 A; 1 C; 1 G; 10 U; 0 other;

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   28.6%;  Pred. No. 5.1e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1525 TATTTTTAACTTTA 1538
              :|::::: ||:::|
Db          1 UAUUUUUUACUUUA 14


RESULT 778
AAA21356/c
ID   AAA21356 standard; RNA; 17 BP.
XX
AC   AAA21356;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin alpha 6 subunit substrate sequence SEQ ID NO:4582.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors -
XX
PS   Claim 55; Page 203; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 7 A; 5 C; 2 G; 3 U; 0 other;

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        642 TATAAGGATTTTCC 655
              | ||||||||||||
Db         15 TTTAAGGATTTTCC 2


RESULT 779
AAA21375
ID   AAA21375 standard; RNA; 17 BP.
XX
AC   AAA21375;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin alpha 6 subunit substrate sequence SEQ ID NO:4601.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors -
XX
PS   Claim 55; Page 204; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
```

```
C   AAA23422 represent their corresponding target sequences. The ribozymes of
C   the invention are used for modulating the synthesis, expression and/or
C   stability of an mRNA encoding angiogenic factor, especially ARNT,
C   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
C   especially used to treat cancer, diabetic retinopathy, age related
C   macular degeneration (ARMD), inflammation, and arthritis, as well as
C   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
C   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
C   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
C   and other syndromes and diseases related to the levels of ARNT, Tie-2,
C   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ  Sequence 17 BP; 7 A; 2 C; 1 G; 7 U; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
 Best Local Similarity   50.0%;  Pred. No. 5.1e+02;
 Matches    7;  Conservative    6;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1617 AAAATATAATTTGT 1630
              |||| :|:| ::: :
Db          4 AAAAUAUAUUUUGU 17


RESULT 780
AAA21375/c
ID  AAA21375 standard; RNA; 17 BP.
XX
AC  AAA21375;
XX
DT  19-JUN-2000  (first entry)
XX
DE  Integrin alpha 6 subunit substrate sequence SEQ ID NO:4601.
XX
KW  Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW  integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW  hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW  ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW  dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW  age related macular degeneration; inflammation; neovascular glaucoma;
KW  myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW  tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW  Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS  Homo sapiens.
XX
PN  WO9950403-A2.
XX
PD  07-OCT-1999.
XX
PF  24-MAR-1999;  99WO-US06507.
XX
PR  27-MAR-1998;  98US-0079678.
XX
PA  (RIBO-) RIBOZYME PHARM INC.
XX
PI  Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR  WPI; 1999-591315/50.
XX
PT  Novel ribozymes for modulating the synthesis, expression and/or
PT  stability of an mRNA encoding an angiogenic factors  -
XX
PS  Claim 55; Page 204; 305pp; English.
XX
CC  The present invention describes enzymatic nucleic acid molecules with
CC  RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC  hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC  gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC  AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC  and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC  corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC  AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC  and AAA19155 to AAA19222 represent their corresponding target sequences;
CC  AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC  sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC  AAA21596 to AAA21688 represent their corresponding target sequences;
CC  AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC  for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC  AAA23422 represent their corresponding target sequences. The ribozymes of
CC  the invention are used for modulating the synthesis, expression and/or
CC  stability of an mRNA encoding angiogenic factor, especially ARNT,
CC  integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC  especially used to treat cancer, diabetic retinopathy, age related
CC  macular degeneration (ARMD), inflammation, and arthritis, as well as
CC  neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC  angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC  syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC  and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC  integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ  Sequence 17 BP; 7 A; 2 C; 1 G; 7 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1617 AAAATATAATTTGT 1630
              |||||||| |||||
Db         15 AAAATATATTTTGT 2


RESULT 781
AAA21377
ID  AAA21377 standard; RNA; 17 BP.
XX
AC  AAA21377;
XX
DT  19-JUN-2000  (first entry)
XX
DE  Integrin alpha 6 subunit substrate sequence SEQ ID NO:4603.
XX
KW  Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW  integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW  hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW  ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW  dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW  age related macular degeneration; inflammation; neovascular glaucoma;
KW  myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW  tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW  Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS  Homo sapiens.
XX
PN  WO9950403-A2.
XX
PD  07-OCT-1999.
XX
PF  24-MAR-1999;  99WO-US06507.
XX
PR  27-MAR-1998;  98US-0079678.
XX
PA  (RIBO-) RIBOZYME PHARM INC.
XX
PI  Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR  WPI; 1999-591315/50.
XX
PT  Novel ribozymes for modulating the synthesis, expression and/or
PT  stability of an mRNA encoding an angiogenic factors  -
XX
PS  Claim 55; Page 204; 305pp; English.
XX
CC  The present invention describes enzymatic nucleic acid molecules with
CC  RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC  hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC  gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
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```
:C   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
:C   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
:C   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
:C   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
:C   and AAA19155 to AAA19222 represent their corresponding target sequences;
:C   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
:C   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
:C   AAA21596 to AAA21688 represent their corresponding target sequences;
:C   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
:C   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
:C   AAA23422 represent their corresponding target sequences. The ribozymes of
:C   the invention are used for modulating the synthesis, expression and/or
:C   stability of an mRNA encoding angiogenic factor, especially ARNT,
:C   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
:C   especially used to treat cancer, diabetic retinopathy, age related
:C   macular degeneration (ARMD), inflammation, and arthritis, as well as
:C   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
:C   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
:C   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
:C   and other syndromes and diseases related to the levels of ARNT, Tie-2,
:C   integrin subunit alpha-6, or integrin subunit beta-3.
:X
:Q   Sequence 17 BP; 6 A; 1 C; 1 G; 9 U; 0 other;

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   42.9%;  Pred. No. 5.1e+02;
  Matches    6;  Conservative    7;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1618 AAATATAATTTGTT 1631
              ||| :|:| ::: |::
Db          1 AAAUAUAUUUUGUU 14


RESULT 782
AAA21423
ID   AAA21423 standard; RNA; 17 BP.
XX
AC   AAA21423;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin alpha 6 subunit substrate sequence SEQ ID NO:4649.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors  -
XX
PS   Claim 55; Page 207; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 5 A; 0 C; 5 G; 7 U; 0 other;

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   57.1%;  Pred. No. 5.1e+02;
  Matches    8;  Conservative    5;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1126 AAAGATGTTATAGT 1139
              ||||:|::|: |:
Db          1 AAAGAUGUUAUGGU 14


RESULT 783
AAA22694
ID   AAA22694 standard; RNA; 17 BP.
XX
AC   AAA22694;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin subunit beta 3 substrate sequence SEQ ID NO:5920.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
```

Novel ribozymes for modulating the synthesis, expression and/or stability of an mRNA encoding an angiogenic factors -

Claim 54; Page 236; 305pp; English.

The present invention describes enzymatic nucleic acid molecules with RNA cleaving activity, which specifically cleave RNA encoded by an aryl hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3 gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT, and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086 and AAA19155 to AAA19222 represent their corresponding target sequences; AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and AAA21596 to AAA21688 represent their corresponding target sequences; AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to AAA23422 represent their corresponding target sequences. The ribozymes of the invention are used for modulating the synthesis, expression and/or stability of an mRNA encoding angiogenic factor, especially ARNT, integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are especially used to treat cancer, diabetic retinopathy, age related macular degeneration (ARMD), inflammation, and arthritis, as well as neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris, angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome, and other syndromes and diseases related to the levels of ARNT, Tie-2, integrin subunit alpha-6, or integrin subunit beta-3.

Sequence 17 BP; 4 A; 0 C; 0 G; 13 U; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   21.4%;  Pred. No. 5.1e+02;
Matches    3;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1040 TTTATTATTTATGT 1053
              :::|::|:::|: :
Db          4 UUUAUUAUUUAUUU 17
```

```
ESULT 784
AA22805/c
D   AAA22805 standard; RNA; 17 BP.
X
C   AAA22805;
X
T   19-JUN-2000  (first entry)
X
E   Integrin subunit beta 3 substrate sequence SEQ ID NO:6031.
X
W   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
W   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
W   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
W   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
W   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
W   age related macular degeneration; inflammation; neovascular glaucoma;
W   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
W   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
W   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
X
S   Homo sapiens.
X
N   WO9950403-A2.
X
D   07-OCT-1999.
X
F   24-MAR-1999;   99WO-US06507.
X
R   27-MAR-1998;   98US-0079678.
X
```

```
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors -
XX
PS   Claim 54; Page 243; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 0 A; 1 C; 2 G; 14 U; 0 other;
```

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1207 AAACAAACAAACAA 1220
              ||||||||||| ||
Db         17 AAACAAACAAAAAA 4
```

```
RESULT 785
AAX78370/c
ID   AAX78370 standard; DNA; 17 BP.
XX
AC   AAX78370;
XX
DT   25-AUG-1999  (first entry)
XX
DE   Human BRCA2 5374del4 mutation allele specific probe 2.
XX
KW   BRCA2; breast cancer; PCR primer; mutation; detection; human; cancer;
KW   susceptibility; predisposition; ovarian cancer; assay; allele specific;
KW   sequence variation; probe; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9928506-A2.
XX
PD   10-JUN-1999.
XX
PF   02-DEC-1998;   98WO-US25511.
XX
PR   02-DEC-1997;   97US-0984034.
XX
```

```
A   (GENE-) GENE LOGIC.
X
I   Allen AP,  Lawrence T,  Lescallett JL,  Olson SJ,  Thurber DB;
I   White MB;
X
R   WPI; 1999-371141/31.
X
T   Detecting mutations in the BRCA2 gene
X
S   Claim 16; Page 70; 76pp; English.
X
C   This invention describes novel primers and probes (AAX78355-X78378)
C   which are used to detect novel mutations in the human BRCA2 gene at
C   nucleotide positions 2192, 3772, 5193, 5374, 6495 or 6909. The products
C   of the invention are used for detecting in an individual a predisposition
C   or higher susceptibility to cancers such as breast or ovarian cancer.
C   The invention describes a process for the accurate identification of
C   sequence variation in a BRCA2 polynucleotide and the identification
C   process includes allele-specific sequence based assays of known sequence
C   variations.
X
Q   Sequence 17 BP; 8 A; 0 C; 1 G; 8 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1010 AATTATTTTCAAGT 1023
              ||||||||||| |
Db         17 AATTATTTTCAAAT 4


RESULT 786
AAF02053/c
ID   AAF02053 standard; DNA; 17 BP.
XX
AC   AAF02053;
XX
DT   16-FEB-2001  (first entry)
XX
DE   Hammerhead ribozyme substrate #348.
XX
KW   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW   interferon alpha; ss.
XX
OS   Homo sapiens.
XX
PN   WO200061729-A2.
XX
PD   19-OCT-2000.
XX
PF   11-APR-2000; 2000WO-US09721.
XX
PR   12-APR-1999;   99US-0129390.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Blatt L,  Zwick M,  Pavco P,  McSwiggen J;
XX
DR   WPI; 2000-647423/62.
XX
PT   Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT   useful for producing e.g. granulocyte colony stimulating factor
PT   protein, interferon alpha and erythropoietin -
XX
PS   Claim 37; Page 63; 164pp; English.
XX
CC   The present invention relates to enzymatic and antisense nucleic acid
CC   molecules that act as inhibitors of the expression of repressor genes
CC   encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC   transcription factor gene, IRF-2 and/or the CAATT Displacement
CC   Protein (CDP). Inhibition of the repressors removes prevents
CC   inhibition (and consequently increases expression of) genes involved in
CC   the production of erythropoietin, granulocyte colony stimulating factor
CC   protein and interferon alpha.
XX
SQ   Sequence 17 BP; 8 A; 1 C; 1 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1005 ACATAAATTATTTT 1018
              | ||||||||||||
Db         17 AAATAAATTATTTT 4


RESULT 787
AAF02055/c
ID   AAF02055 standard; DNA; 17 BP.
XX
AC   AAF02055;
XX
DT   16-FEB-2001  (first entry)
XX
DE   Hammerhead ribozyme substrate #350.
XX
KW   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW   interferon alpha; ss.
XX
OS   Homo sapiens.
XX
PN   WO200061729-A2.
XX
PD   19-OCT-2000.
XX
PF   11-APR-2000; 2000WO-US09721.
XX
PR   12-APR-1999;   99US-0129390.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Blatt L,  Zwick M,  Pavco P,  McSwiggen J;
XX
DR   WPI; 2000-647423/62.
XX
PT   Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT   useful for producing e.g. granulocyte colony stimulating factor
PT   protein, interferon alpha and erythropoietin -
XX
PS   Claim 37; Page 63; 164pp; English.
XX
CC   The present invention relates to enzymatic and antisense nucleic acid
CC   molecules that act as inhibitors of the expression of repressor genes
CC   encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC   transcription factor gene, IRF-2 and/or the CAATT Displacement
CC   Protein (CDP). Inhibition of the repressors removes prevents
CC   inhibition (and consequently increases expression of) genes involved in
CC   the production of erythropoietin, granulocyte colony stimulating factor
CC   protein and interferon alpha.
XX
SQ   Sequence 17 BP; 6 A; 1 C; 1 G; 9 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1004 AACATAAATTATTT 1017
              || |||||||||||
Db         14 AAAATAAATTATTT 1


RESULT 788
AAF02358/c
ID   AAF02358 standard; DNA; 17 BP.
XX
```

AC AAF02358;

XX

DT 16-FEB-2001 (first entry)

XX

DE Hammerhead ribozyme substrate #653.

XX

KW Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW interferon alpha; ss.

XX

OS Homo sapiens.

XX

PN WO200061729-A2.

XX

PD 19-OCT-2000.

XX

PF 11-APR-2000; 2000WO-US09721.

XX

PR 12-APR-1999; 99US-0129390.

XX

PA (RIBO-) RIBOZYME PHARM INC.

XX

PI Blatt L, Zwick M, Pavco P, McSwiggen J;

XX

DR WPI; 2000-647423/62.

XX

PT Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT useful for producing e.g. granulocyte colony stimulating factor
PT protein, interferon alpha and erythropoietin -

XX

PS Claim 37; Page 70; 164pp; English.

XX

CC The present invention relates to enzymatic and antisense nucleic acid
CC molecules that act as inhibitors of the expression of repressor genes
CC encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC transcription factor gene, IRF-2 and/or the CAATT Displacement
CC Protein (CDP). Inhibition of the repressors removes prevents
CC inhibition (and consequently increases expression of) genes involved in
CC the production of erythropoietin, granulocyte colony stimulating factor
CC protein and interferon alpha.

XX

SQ Sequence 17 BP; 3 A; 3 C; 4 G; 7 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 497 CCAGATGCAATACA 510
||||||||||| |
Db 17 CCAGATGCAATAAA 4

RESULT 789
AAF02464/c
ID AAF02464 standard; DNA; 17 BP.

XX

AC AAF02464;

XX

DT 16-FEB-2001 (first entry)

XX

DE Hammerhead ribozyme substrate #759.

XX

KW Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW interferon alpha; ss.

XX

OS Homo sapiens.

XX

PN WO200061729-A2.

XX

PD 19-OCT-2000.

XX

PF 11-APR-2000; 2000WO-US09721.

XX

PR 12-APR-1999; 99US-0129390.

XX

PA (RIBO-) RIBOZYME PHARM INC.

XX

PI Blatt L, Zwick M, Pavco P, McSwiggen J;

XX

DR WPI; 2000-647423/62.

XX

PT Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT useful for producing e.g. granulocyte colony stimulating factor
PT protein, interferon alpha and erythropoietin -

XX

PS Claim 37; Page 73; 164pp; English.

XX

CC The present invention relates to enzymatic and antisense nucleic acid
CC molecules that act as inhibitors of the expression of repressor genes
CC encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC transcription factor gene, IRF-2 and/or the CAATT Displacement
CC Protein (CDP). Inhibition of the repressors removes prevents
CC inhibition (and consequently increases expression of) genes involved in
CC the production of erythropoietin, granulocyte colony stimulating factor
CC protein and interferon alpha.

XX

SQ Sequence 17 BP; 0 A; 2 C; 3 G; 12 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1207 AAACAAACAAACAA 1220
||||||||||||| |
Db 17 AAACAAACAAACGA 4

RESULT 790
AAF02466/c
ID AAF02466 standard; DNA; 17 BP.

XX

AC AAF02466;

XX

DT 16-FEB-2001 (first entry)

XX

DE Hammerhead ribozyme substrate #761.

XX

KW Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW interferon alpha; ss.

XX

OS Homo sapiens.

XX

PN WO200061729-A2.

XX

PD 19-OCT-2000.

XX

PF 11-APR-2000; 2000WO-US09721.

XX

PR 12-APR-1999; 99US-0129390.

XX

PA (RIBO-) RIBOZYME PHARM INC.

XX

PI Blatt L, Zwick M, Pavco P, McSwiggen J;

XX

DR WPI; 2000-647423/62.

XX

PT Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT useful for producing e.g. granulocyte colony stimulating factor
PT protein, interferon alpha and erythropoietin -

XX

PS Claim 37; Page 73; 164pp; English.

XX

CC The present invention relates to enzymatic and antisense nucleic acid
CC molecules that act as inhibitors of the expression of repressor genes
CC encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC transcription factor gene, IRF-2 and/or the CAATT Displacement
CC Protein (CDP). Inhibition of the repressors removes prevents

```
'C   inhibition (and consequently increases expression of) genes involved in
'C   the production of erythropoietin, granulocyte colony stimulating factor
C   protein and interferon alpha.
X
Q   Sequence 17 BP; 2 A; 2 C; 3 G; 10 T; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
 Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y       1205 TTAAACAAACAAAC 1218
             | ||||||||||||
b         15 TGAAACAAACAAAC 2


ESULT 791
AF03200
D   AAF03200 standard; DNA; 17 BP.
X
C   AAF03200;
X
T   16-FEB-2001  (first entry)
X
E   Hammerhead ribozyme substrate #1495.
X
W   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
W   interferon alpha; ss.
X
S   Homo sapiens.
X
N   WO200061729-A2.
X
D   19-OCT-2000.
X
F   11-APR-2000; 2000WO-US09721.
X
R   12-APR-1999;   99US-0129390.
X
A   (RIBO-) RIBOZYME PHARM INC.
X
I   Blatt L,  Zwick M,  Pavco P,  McSwiggen J;
X
R   WPI; 2000-647423/62.
X
T   Enzymatic and antisense nucleic acid inhibition of repressor genes,
T   useful for producing e.g. granulocyte colony stimulating factor
T   protein, interferon alpha and erythropoietin -
X
S   Claim 37; Page 90; 164pp; English.
X
C   The present invention relates to enzymatic and antisense nucleic acid
C   molecules that act as inhibitors of the expression of repressor genes
C   encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
C   transcription factor gene, IRF-2 and/or the CAATT Displacement
C   Protein (CDP). Inhibition of the repressors removes prevents
C   inhibition (and consequently increases expression of) genes involved in
C   the production of erythropoietin, granulocyte colony stimulating factor
C   protein and interferon alpha.
X
Q   Sequence 17 BP; 7 A; 2 C; 2 G; 6 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1502 GCATTTTTAAATAC 1515
             |||||| |||||||
Db         4 GCATTTGTAAATAC 17


RESULT 792
AAF03201
ID   AAF03201 standard; DNA; 17 BP.
XX
AC   AAF03201;
XX
DT   16-FEB-2001  (first entry)
XX
DE   Hammerhead ribozyme substrate #1496.
XX
KW   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW   interferon alpha; ss.
XX
OS   Homo sapiens.
XX
PN   WO200061729-A2.
XX
PD   19-OCT-2000.
XX
PF   11-APR-2000; 2000WO-US09721.
XX
PR   12-APR-1999;   99US-0129390.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Blatt L,  Zwick M,  Pavco P,  McSwiggen J;
XX
DR   WPI; 2000-647423/62.
XX
PT   Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT   useful for producing e.g. granulocyte colony stimulating factor
PT   protein, interferon alpha and erythropoietin -
XX
PS   Claim 37; Page 90; 164pp; English.
XX
CC   The present invention relates to enzymatic and antisense nucleic acid
CC   molecules that act as inhibitors of the expression of repressor genes
CC   encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC   transcription factor gene, IRF-2 and/or the CAATT Displacement
CC   Protein (CDP). Inhibition of the repressors removes prevents
CC   inhibition (and consequently increases expression of) genes involved in
CC   the production of erythropoietin, granulocyte colony stimulating factor
CC   protein and interferon alpha.
XX
SQ   Sequence 17 BP; 5 A; 3 C; 2 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1502 GCATTTTTAAATAC 1515
             |||||| |||||||
Db         1 GCATTTGTAAATAC 14


RESULT 793
AAF03239/c
ID   AAF03239 standard; DNA; 17 BP.
XX
AC   AAF03239;
XX
DT   16-FEB-2001  (first entry)
XX
DE   Hammerhead ribozyme substrate #1534.
XX
KW   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW   interferon alpha; ss.
XX
OS   Homo sapiens.
XX
PN   WO200061729-A2.
XX
PD   19-OCT-2000.
XX
PF   11-APR-2000; 2000WO-US09721.
XX
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PR 12-APR-1999; 99US-0129390.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Blatt L, Zwick M, Pavco P, McSwiggen J;
XX
DR WPI; 2000-647423/62.
XX
PT Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT useful for producing e.g. granulocyte colony stimulating factor
PT protein, interferon alpha and erythropoietin -
XX
PS Claim 37; Page 90; 164pp; English.
XX
CC The present invention relates to enzymatic and antisense nucleic acid
CC molecules that act as inhibitors of the expression of repressor genes
CC encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC transcription factor gene, IRF-2 and/or the CAATT Displacement
CC Protein (CDP). Inhibition of the repressors removes prevents
CC inhibition (and consequently increases expression of) genes involved in
CC the production of erythropoietin, granulocyte colony stimulating factor
CC protein and interferon alpha.
X
Q Sequence 17 BP; 10 A; 0 C; 3 G; 4 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

y 1520 CTTTATATTTTAA 1533
|||| |||||||||
b 14 CTTTTTATTTTAA 1

ESULT 794
AF04948
D AAF04948 standard; DNA; 17 BP.
K
C AAF04948;
K
D 16-FEB-2001 (first entry)
E
E Hammerhead ribozyme substrate #2464.
C
K Ribozyme; erythropoietin; granulocyte colony stimulating factor;
K interferon alpha; ss.
C
S Homo sapiens.
C
R WO200061729-A2.
C
D 19-OCT-2000.
C
F 11-APR-2000; 2000WO-US09721.
C
R 12-APR-1999; 99US-0129390.
C
A (RIBO-) RIBOZYME PHARM INC.
C
I Blatt L, Zwick M, Pavco P, McSwiggen J;
C
R WPI; 2000-647423/62.
C
T Enzymatic and antisense nucleic acid inhibition of repressor genes,
T useful for producing e.g. granulocyte colony stimulating factor
T protein, interferon alpha and erythropoietin -
C
S Claim 4; Page 112; 164pp; English.
C
C The present invention relates to enzymatic and antisense nucleic acid
C molecules that act as inhibitors of the expression of repressor genes
C encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
C transcription factor gene, IRF-2 and/or the CAATT Displacement
C Protein (CDP). Inhibition of the repressors removes prevents
C inhibition (and consequently increases expression of) genes involved in
C the production of erythropoietin, granulocyte colony stimulating factor
C protein and interferon alpha.
C
Q Sequence 17 BP; 6 A; 1 C; 2 G; 8 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 632 AATTTTTGAATATA 645
||| ||||||||||
Db 4 AATGTTTGAATATA 17

RESULT 795
AAF05508
ID AAF05508 standard; DNA; 17 BP.
XX
AC AAF05508;
XX
DT 16-FEB-2001 (first entry)
XX
DE Hammerhead ribozyme substrate #2727.
XX
KW Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW interferon alpha; ss.
XX
OS Homo sapiens.
XX
PN WO200061729-A2.
XX
PD 19-OCT-2000.
XX
PF 11-APR-2000; 2000WO-US09721.
XX
PR 12-APR-1999; 99US-0129390.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Blatt L, Zwick M, Pavco P, McSwiggen J;
XX
DR WPI; 2000-647423/62.
XX
PT Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT useful for producing e.g. granulocyte colony stimulating factor
PT protein, interferon alpha and erythropoietin -
XX
PS Claim 18; Page 118; 164pp; English.
XX
CC The present invention relates to enzymatic and antisense nucleic acid
CC molecules that act as inhibitors of the expression of repressor genes
CC encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC transcription factor gene, IRF-2 and/or the CAATT Displacement
CC Protein (CDP). Inhibition of the repressors removes prevents
CC inhibition (and consequently increases expression of) genes involved in
CC the production of erythropoietin, granulocyte colony stimulating factor
CC protein and interferon alpha.
XX
SQ Sequence 17 BP; 1 A; 1 C; 2 G; 13 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 829 TGGATTTTTTTCTG 842
|| ||||||||||||
Db 4 TGTATTTTTTTCTG 17

RESULT 796
AAF05509

```
ID   AAF05509 standard; DNA; 17 BP.
XX
AC   AAF05509;
XX
DT   16-FEB-2001  (first entry)
XX
DE   Hammerhead ribozyme substrate #2728.
XX
KW   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW   interferon alpha; ss.
XX
OS   Homo sapiens.
XX
PN   WO200061729-A2.
XX
PD   19-OCT-2000.
XX
PF   11-APR-2000; 2000WO-US09721.
XX
PR   12-APR-1999;   99US-0129390.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Blatt L,  Zwick M,  Pavco P,  McSwiggen J;
XX
DR   WPI; 2000-647423/62.
XX
PT   Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT   useful for producing e.g. granulocyte colony stimulating factor
PT   protein, interferon alpha and erythropoietin -
XX
PS   Claim 18; Page 118; 164pp; English.
XX
CC   The present invention relates to enzymatic and antisense nucleic acid
CC   molecules that act as inhibitors of the expression of repressor genes
CC   encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC   transcription factor gene, IRF-2 and/or the CAATT Displacement
CC   Protein (CDP). Inhibition of the repressors removes prevents
CC   inhibition (and consequently increases expression of) genes involved in
CC   the production of erythropoietin, granulocyte colony stimulating factor
CC   protein and interferon alpha.
XX
SQ   Sequence 17 BP; 1 A; 1 C; 3 G; 12 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        829 TGGATTTTTTTCTG 842
              || |||||||||||
Db          3 TGTATTTTTTTCTG 16


RESULT 797
AF05526
D   AAF05526 standard; DNA; 17 BP.
X
C   AAF05526;
X
T   16-FEB-2001  (first entry)
X
E   Hammerhead ribozyme substrate #2745.
X
W   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
W   interferon alpha; ss.
X
S   Homo sapiens.
X
N   WO200061729-A2.
X
D   19-OCT-2000.
X
F   11-APR-2000; 2000WO-US09721.
XX
PR   12-APR-1999;   99US-0129390.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Blatt L,  Zwick M,  Pavco P,  McSwiggen J;
XX
DR   WPI; 2000-647423/62.
XX
PT   Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT   useful for producing e.g. granulocyte colony stimulating factor
PT   protein, interferon alpha and erythropoietin -
XX
PS   Claim 18; Page 118; 164pp; English.
XX
CC   The present invention relates to enzymatic and antisense nucleic acid
CC   molecules that act as inhibitors of the expression of repressor genes
CC   encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC   transcription factor gene, IRF-2 and/or the CAATT Displacement
CC   Protein (CDP). Inhibition of the repressors removes prevents
CC   inhibition (and consequently increases expression of) genes involved in
CC   the production of erythropoietin, granulocyte colony stimulating factor
CC   protein and interferon alpha.
XX
SQ   Sequence 17 BP; 6 A; 1 C; 1 G; 9 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        627 CAAATAATTTTTGA 640
              | |||||||||||||
Db          1 CTAATAATTTTTGA 14


RESULT 798
AAF06144/c
ID   AAF06144 standard; DNA; 17 BP.
XX
AC   AAF06144;
XX
DT   16-FEB-2001  (first entry)
XX
DE   Hammerhead ribozyme substrate #2941.
XX
KW   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW   interferon alpha; ss.
XX
OS   Homo sapiens.
XX
PN   WO200061729-A2.
XX
PD   19-OCT-2000.
XX
PF   11-APR-2000; 2000WO-US09721.
XX
PR   12-APR-1999;   99US-0129390.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Blatt L,  Zwick M,  Pavco P,  McSwiggen J;
XX
DR   WPI; 2000-647423/62.
XX
PT   Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT   useful for producing e.g. granulocyte colony stimulating factor
PT   protein, interferon alpha and erythropoietin -
XX
PS   Claim 42; Page 123; 164pp; English.
XX
CC   The present invention relates to enzymatic and antisense nucleic acid
CC   molecules that act as inhibitors of the expression of repressor genes
CC   encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
```

transcription factor gene, IRF-2 and/or the CAATT Displacement
Protein (CDP). Inhibition of the repressors removes prevents
inhibition (and consequently increases expression of) genes involved in
the production of erythropoietin, granulocyte colony stimulating factor
protein and interferon alpha.

Sequence 17 BP; 1 A; 0 C; 4 G; 12 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

1207 AAACAAACAAACAA 1220
| ||||||||||||
17 ATACAAACAAACAA 4

SULT 799
F06145/c
AAP06145 standard; DNA; 17 BP.

AAP06145;

16-FEB-2001 (first entry)

Hammerhead ribozyme substrate #2942.

Ribozyme; erythropoietin; granulocyte colony stimulating factor;
interferon alpha; ss.

Homo sapiens.

WO200061729-A2.

19-OCT-2000.

11-APR-2000; 2000WO-US09721.

12-APR-1999; 99US-0129390.

(RIBO-) RIBOZYME PHARM INC.

Blatt L, Zwick M, Pavco P, McSwiggen J;

WPI; 2000-647423/62.

Enzymatic and antisense nucleic acid inhibition of repressor genes,
useful for producing e.g. granulocyte colony stimulating factor
protein, interferon alpha and erythropoietin -

Claim 42; Page 123; 164pp; English.

The present invention relates to enzymatic and antisense nucleic acid
molecules that act as inhibitors of the expression of repressor genes
encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
transcription factor gene, IRF-2 and/or the CAATT Displacement
Protein (CDP). Inhibition of the repressors removes prevents
inhibition (and consequently increases expression of) genes involved in
the production of erythropoietin, granulocyte colony stimulating factor
protein and interferon alpha.

Sequence 17 BP; 1 A; 0 C; 3 G; 13 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

1207 AAACAAACAAACAA 1220
| ||||||||||||
14 ATACAAACAAACAA 1

SULT 800
AAA36307
ID AAA36307 standard; DNA; 17 BP.
XX
AC AAA36307;
XX
DT 26-JUL-2000 (first entry)
XX
DE Human genomic SNP allele specific oligonucleotide SEQ ID NO:373.
XX
KW Human; single nucleotide polymorphism; SNP; genotyping; DNA analysis;
KW allele specific oligonucleotide; ASO; reduced complexity genome; RCG;
KW genomic classification; identification; DNA fingerprinting;
KW tumour characterisation; hybridisation; ss.
XX
OS Homo sapiens.
XX
PN WO200018960-A2.
XX
PD 06-APR-2000.
XX
PF 24-SEP-1999; 99WO-US22283.
XX
PR 25-SEP-1998; 98US-0101757.
XX
PA (MASI) MASSACHUSETTS INST TECHNOLOGY.
XX
PI Landers JE, Jordan B, Housman DE, Charest A;
XX
DR WPI; 2000-293181/25.
XX
PT Detection of single nucleotide polymorphisms in genomes by preparation
PT and analysis of reduced complexity genomes, useful for genotyping,
PT fingerprinting and determining allele frequency of SNPs -
XX
PS Disclosure; Page 64; 111pp; English.
XX
CC A method has been developed for detecting the presence or absence of a
CC single nucleotide polymorphism (SNP) allele in a genomic sample. The
CC method comprises preparing a reduced complexity genome (RCG) from the
CC genomic sample and analysing the RCG for the presence or absence of a
CC SNP allele. The method can be used to characterise a tumour, to generate
CC a genomic pattern for an individual genome or to generate a genomic
CC classification code for a genome. The method can be used to assess
CC whether a subject is at risk for developing a disease or to identify a
CC set of SNP alleles associated with a disease. The method can also be
CC used to perform linkage analysis. AAA35944 to AAA35947 represent
CC sequences used in the exemplification of the present invention. AAA35948
CC to AAA36632 represent nucleotide sequences containing SNPs.
XX
SQ Sequence 17 BP; 11 A; 6 C; 0 G; 0 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1207 AAACAAACAAACAA 1220
|||||||| |||||
Db 1 AAACAAACCAACAA 14

RESULT 801
AAA36500
ID AAA36500 standard; DNA; 17 BP.
XX
AC AAA36500;
XX
DT 26-JUL-2000 (first entry)
XX
DE Human genomic SNP allele specific oligonucleotide SEQ ID NO:565.
XX
KW Human; single nucleotide polymorphism; SNP; genotyping; DNA analysis;
KW allele specific oligonucleotide; ASO; reduced complexity genome; RCG;
KW genomic classification; identification; DNA fingerprinting;

KW tumour characterisation; hybridisation; ss.
XX
OS Homo sapiens.
XX
PN WO200018960-A2.
XX
PD 06-APR-2000.
XX
PF 24-SEP-1999; 99WO-US22283.
XX
PR 25-SEP-1998; 98US-0101757.
XX
PA (MASI) MASSACHUSETTS INST TECHNOLOGY.
XX
PI Landers JE, Jordan B, Housman DE, Charest A;
XX
DR WPI; 2000-293181/25.
XX
PT Detection of single nucleotide polymorphisms in genomes by preparation
PT and analysis of reduced complexity genomes, useful for genotyping,
PT fingerprinting and determining allele frequency of SNPs -
XX
PS Disclosure; Page 70; 111pp; English.
XX
CC A method has been developed for detecting the presence or absence of a
CC single nucleotide polymorphism (SNP) allele in a genomic sample. The
CC method comprises preparing a reduced complexity genome (RCG) from the
CC genomic sample and analysing the RCG for the presence or absence of a
CC SNP allele. The method can be used to characterise a tumour, to generate
CC a genomic pattern for an individual genome or to generate a genomic
CC classification code for a genome. The method can be used to assess
CC whether a subject is at risk for developing a disease or to identify a
CC set of SNP alleles associated with a disease. The method can also be
CC used to perform linkage analysis. AAA35944 to AAA35947 represent
CC sequences used in the exemplification of the present invention. AAA35948
CC to AAA36632 represent nucleotide sequences containing SNPs.
XX
SQ Sequence 17 BP; 5 A; 1 C; 5 G; 6 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1191 TCAGGGTTTTAGA 1204
||||||||||| |||
Db 4 TCAGGGTTTAAGA 17

RESULT 802
AAA25555/c
ID AAA25555 standard; DNA; 17 BP.
XX
AC AAA25555;
XX
DT 19-JUL-2000 (first entry)
XX
DE Oestrogen receptor hammerhead ribozyme target sequence SEQ ID NO:2053.
XX
KW Oestrogen receptor; c-raf; k-ras; bcl-2; ribozyme; cleavage;
KW hammerhead ribozyme; hairpin ribozyme; antisense oligonucleotide;
KW gene expression modification; cancer; phosphorothioate; endonuclease;
KW anticancer; breast cancer; endometrium cancer; ss.
XX
OS Homo sapiens.
XX
PN WO9954459-A2.
XX
PD 28-OCT-1999.
XX
PF 19-APR-1999; 99WO-US08547.
XX
PR 20-APR-1998; 98US-0082404.
PR 23-JUN-1998; 98US-0103636.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Thompson JD, Beigelman L, McSwiggen JA, Karpeisky A, Bellon L;
PI Reynolds M, Zwick M, Jarvis T, Woolf T, Haeberli P;
PI Matulic-Adamic J;
XX
DR WPI; 2000-013248/01.
XX
PT New nucleic acids that interact, and optionally cleave, target
PT sequences, used to treat cancer -
XX
PS Claim 77; Page 83; 148pp; English.
XX
CC The present invention describes nucleic acids (A) that interact stably
CC with a target sequence and contain at least one phosphoro(di)thioate
CC link, having endonuclease activity. (A), and more generally any
CC catalytic nucleic acid (A') that modulates expression of the oestrogen
CC receptor gene, are used to treat cancer (particularly of breast or
CC endometrium), in vivo or by transforming cells ex vivo and implanting
CC treated cells, or for other conditions associated with levels of
CC oestrogen receptor. Because of the high selectivity for targeted RNA, (A)
CC can also be used to correlate inhibition of gene expression with
CC alterations in phenotype, particularly for identification of therapeutic
CC targets, and as research reagents (for RNA, in the same way that
CC restriction endonucleases are used with DNA). The combination of
CC modifications in (A) improves resistance to nucleases, binding affinity
CC and/or activity. AAA23503 to AAA24747 represent oestrogen receptor
CC hammerhead ribozyme sequences, and AAA24748 to AAA25992 represent their
CC corresponding target sequences. AAA25993 to AAA26105 represent oestrogen
CC receptor hairpin ribozyme sequences, and AAA26107 to AAA26218 represent
CC their corresponding target sequences. AAA26219 to AAA26271 represent
CC other ribozyme sequences and antisense oligonucleotides used in the
CC exemplification of the present invention.
XX
SQ Sequence 17 BP; 13 A; 1 C; 0 G; 3 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1143 TTTATTTTATTTTA 1156
||| ||||||||||
Db 16 TTTGTTTTATTTTA 3

RESULT 803
AAA25890
ID AAA25890 standard; DNA; 17 BP.
XX
AC AAA25890;
XX
DT 19-JUL-2000 (first entry)
XX
DE Oestrogen receptor hammerhead ribozyme target sequence SEQ ID NO:2388.
XX
KW Oestrogen receptor; c-raf; k-ras; bcl-2; ribozyme; cleavage;
KW hammerhead ribozyme; hairpin ribozyme; antisense oligonucleotide;
KW gene expression modification; cancer; phosphorothioate; endonuclease;
KW anticancer; breast cancer; endometrium cancer; ss.
XX
OS Homo sapiens.
XX
PN WO9954459-A2.
XX
PD 28-OCT-1999.
XX
PF 19-APR-1999; 99WO-US08547.
XX
PR 20-APR-1998; 98US-0082404.
PR 23-JUN-1998; 98US-0103636.
XX
PA (RIBO-) RIBOZYME PHARM INC.

XX
PI Thompson JD, Beigelman L, McSwiggen JA, Karpeisky A, Bellon L;
PI Reynolds M, Zwick M, Jarvis T, Woolf T, Haeberli P;
PI Matulic-Adamic J;
XX
DR WPI; 2000-013248/01.
XX
PT New nucleic acids that interact, and optionally cleave, target
PT sequences, used to treat cancer -
XX
PS Claim 77; Page 93; 148pp; English.
XX
CC The present invention describes nucleic acids (A) that interact stably
CC with a target sequence and contain at least one phosphoro(di)thioate
CC link, having endonuclease activity. (A), and more generally any
CC catalytic nucleic acid (A') that modulates expression of the oestrogen
CC receptor gene, are used to treat cancer (particularly of breast or
CC endometrium), in vivo or by transforming cells ex vivo and implanting
CC treated cells, or for other conditions associated with levels of
CC oestrogen receptor. Because of the high selectivity for targeted RNA, (A)
CC can also be used to correlate inhibition of gene expression with
CC alterations in phenotype, particularly for identification of therapeutic
CC targets, and as research reagents (for RNA, in the same way that
CC restriction endonucleases are used with DNA). The combination of
CC modifications in (A) improves resistance to nucleases, binding affinity
CC and/or activity. AAA23503 to AAA24747 represent oestrogen receptor
CC hammerhead ribozyme sequences, and AAA24748 to AAA25992 represent their
CC corresponding target sequences. AAA25993 to AAA26105 represent oestrogen
CC receptor hairpin ribozyme sequences, and AAA26107 to AAA26218 represent
CC their corresponding target sequences. AAA26219 to AAA26271 represent
CC other ribozyme sequences and antisense oligonucleotides used in the
CC exemplification of the present invention.
XX
SQ Sequence 17 BP; 7 A; 2 C; 1 G; 7 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1610 AACATTTAAAATAT 1623
||| ||||||||||
Db 4 AACTTTTAAAATAT 17

RESULT 804
AAA25891
ID AAA25891 standard; DNA; 17 BP.
XX
AC AAA25891;
XX
DT 19-JUL-2000 (first entry)
XX
DE Oestrogen receptor hammerhead ribozyme target sequence SEQ ID NO:2389.
XX
KW Oestrogen receptor; c-raf; k-ras; bcl-2; ribozyme; cleavage;
KW hammerhead ribozyme; hairpin ribozyme; antisense oligonucleotide;
KW gene expression modification; cancer; phosphorothioate; endonuclease;
KW anticancer; breast cancer; endometrium cancer; ss.
XX
OS Homo sapiens.
XX
PN WO9954459-A2.
XX
PD 28-OCT-1999.
XX
PF 19-APR-1999; 99WO-US08547.
XX
PR 20-APR-1998; 98US-0082404.
PR 23-JUN-1998; 98US-0103636.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Thompson JD, Beigelman L, McSwiggen JA, Karpeisky A, Bellon L;
PI Reynolds M, Zwick M, Jarvis T, Woolf T, Haeberli P;
PI Matulic-Adamic J;
XX
DR WPI; 2000-013248/01.
XX
PT New nucleic acids that interact, and optionally cleave, target
PT sequences, used to treat cancer -
XX
PS Claim 77; Page 94; 148pp; English.
XX
CC The present invention describes nucleic acids (A) that interact stably
CC with a target sequence and contain at least one phosphoro(di)thioate
CC link, having endonuclease activity. (A), and more generally any
CC catalytic nucleic acid (A') that modulates expression of the oestrogen
CC receptor gene, are used to treat cancer (particularly of breast or
CC endometrium), in vivo or by transforming cells ex vivo and implanting
CC treated cells, or for other conditions associated with levels of
CC oestrogen receptor. Because of the high selectivity for targeted RNA, (A)
CC can also be used to correlate inhibition of gene expression with
CC alterations in phenotype, particularly for identification of therapeutic
CC targets, and as research reagents (for RNA, in the same way that
CC restriction endonucleases are used with DNA). The combination of
CC modifications in (A) improves resistance to nucleases, binding affinity
CC and/or activity. AAA23503 to AAA24747 represent oestrogen receptor
CC hammerhead ribozyme sequences, and AAA24748 to AAA25992 represent their
CC corresponding target sequences. AAA25993 to AAA26105 represent oestrogen
CC receptor hairpin ribozyme sequences, and AAA26107 to AAA26218 represent
CC their corresponding target sequences. AAA26219 to AAA26271 represent
CC other ribozyme sequences and antisense oligonucleotides used in the
CC exemplification of the present invention.
XX
SQ Sequence 17 BP; 7 A; 1 C; 2 G; 7 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1610 AACATTTAAAATAT 1623
||| ||||||||||
Db 3 AACTTTTAAAATAT 16

RESULT 805
AAA25892
ID AAA25892 standard; DNA; 17 BP.
XX
AC AAA25892;
XX
DT 19-JUL-2000 (first entry)
XX
DE Oestrogen receptor hammerhead ribozyme target sequence SEQ ID NO:2390.
XX
KW Oestrogen receptor; c-raf; k-ras; bcl-2; ribozyme; cleavage;
KW hammerhead ribozyme; hairpin ribozyme; antisense oligonucleotide;
KW gene expression modification; cancer; phosphorothioate; endonuclease;
KW anticancer; breast cancer; endometrium cancer; ss.
XX
OS Homo sapiens.
XX
PN WO9954459-A2.
XX
PD 28-OCT-1999.
XX
PF 19-APR-1999; 99WO-US08547.
XX
PR 20-APR-1998; 98US-0082404.
PR 23-JUN-1998; 98US-0103636.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Thompson JD, Beigelman L, McSwiggen JA, Karpeisky A, Bellon L;
PI Reynolds M, Zwick M, Jarvis T, Woolf T, Haeberli P;
PI Matulic-Adamic J;

XX
DR WPI; 2000-013248/01.
XX
PT New nucleic acids that interact, and optionally cleave, target
PT sequences, used to treat cancer -
XX
PS Claim 77; Page 94; 148pp; English.
XX
CC The present invention describes nucleic acids (A) that interact stably
CC with a target sequence and contain at least one phosphoro(di)thioate
CC link, having endonuclease activity. (A), and more generally any
CC catalytic nucleic acid (A') that modulates expression of the oestrogen
CC receptor gene, are used to treat cancer (particularly of breast or
CC endometrium), in vivo or by transforming cells ex vivo and implanting
CC treated cells, or for other conditions associated with levels of
CC oestrogen receptor. Because of the high selectivity for targeted RNA, (A)
CC can also be used to correlate inhibition of gene expression with
CC alterations in phenotype, particularly for identification of therapeutic
CC targets, and as research reagents (for RNA, in the same way that
CC restriction endonucleases are used with DNA). The combination of
CC modifications in (A) improves resistance to nucleases, binding affinity
CC and/or activity. AAA23503 to AAA24747 represent oestrogen receptor
CC hammerhead ribozyme sequences, and AAA24748 to AAA25992 represent their
CC corresponding target sequences. AAA25993 to AAA26105 represent oestrogen
CC receptor hairpin ribozyme sequences, and AAA26107 to AAA26218 represent
CC their corresponding target sequences. AAA26219 to AAA26271 represent
CC other ribozyme sequences and antisense oligonucleotides used in the
CC exemplification of the present invention.
XX
SQ Sequence 17 BP; 7 A; 1 C; 2 G; 7 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1610 AACATTTAAAATAT 1623
||| ||||||||||
Db 2 AACTTTTAAAATAT 15

RESULT 806
AAA25992/c
ID AAA25992 standard; DNA; 17 BP.
XX
AC AAA25992;
XX
DT 19-JUL-2000 (first entry)
XX
DE Oestrogen receptor hammerhead ribozyme target sequence SEQ ID NO:2490.
XX
KW Oestrogen receptor; c-raf; k-ras; bcl-2; ribozyme; cleavage;
KW hammerhead ribozyme; hairpin ribozyme; antisense oligonucleotide;
KW gene expression modification; cancer; phosphorothioate; endonuclease;
KW anticancer; breast cancer; endometrium cancer; ss.
XX
OS Homo sapiens.
XX
PN WO9954459-A2.
XX
PD 28-OCT-1999.
XX
PF 19-APR-1999; 99WO-US08547.
XX
PR 20-APR-1998; 98US-0082404.
PR 23-JUN-1998; 98US-0103636.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Thompson JD, Beigelman L, McSwiggen JA, Karpeisky A, Bellon L;
PI Reynolds M, Zwick M, Jarvis T, Woolf T, Haeberli P;
PI Matulic-Adamic J;
XX
DR WPI; 2000-013248/01.
XX
PT New nucleic acids that interact, and optionally cleave, target
PT sequences, used to treat cancer -
XX
PS Claim 77; Page 97; 148pp; English.
XX
CC The present invention describes nucleic acids (A) that interact stably
CC with a target sequence and contain at least one phosphoro(di)thioate
CC link, having endonuclease activity. (A), and more generally any
CC catalytic nucleic acid (A') that modulates expression of the oestrogen
CC receptor gene, are used to treat cancer (particularly of breast or
CC endometrium), in vivo or by transforming cells ex vivo and implanting
CC treated cells, or for other conditions associated with levels of
CC oestrogen receptor. Because of the high selectivity for targeted RNA, (A)
CC can also be used to correlate inhibition of gene expression with
CC alterations in phenotype, particularly for identification of therapeutic
CC targets, and as research reagents (for RNA, in the same way that
CC restriction endonucleases are used with DNA). The combination of
CC modifications in (A) improves resistance to nucleases, binding affinity
CC and/or activity. AAA23503 to AAA24747 represent oestrogen receptor
CC hammerhead ribozyme sequences, and AAA24748 to AAA25992 represent their
CC corresponding target sequences. AAA25993 to AAA26105 represent oestrogen
CC receptor hairpin ribozyme sequences, and AAA26107 to AAA26218 represent
CC their corresponding target sequences. AAA26219 to AAA26271 represent
CC other ribozyme sequences and antisense oligonucleotides used in the
CC exemplification of the present invention.
XX
SQ Sequence 17 BP; 9 A; 1 C; 2 G; 5 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 599 ATTATTTATTTGAA 612
||| ||||||||||
Db 15 ATTCTTTATTTGAA 2

RESULT 807
ABA77737
ID ABA77737 standard; DNA; 17 BP.
XX
AC ABA77737;
XX
DT 24-JAN-2002 (first entry)
XX
DE Retinoblastoma mutation correcting oligonucleotide SEQ ID NO: 583.
XX
KW Human; gene therapy; adenosine deaminase deficiency; p53; beta-globin;
KW retinoblastoma; BRCA1; BRCA2; CFTR; cystic fibrosis; cancer; Factor V;
KW cyclin-dependent kinase inhibitor 2A; CDKN2A; melanoma; APC; HBA1; HBA2;
KW adenomatous polyposis of the colon; Factor VII; Factor IX; thrombosis;
KW haemophilia; alpha thalassaemia; haemoglobin alpha locus 1; MLH1; APOE;
KW mismatch repair; MSH2; MSH6; hyperlipidaemia; apolipoprotein B; LDLR;
KW familial hypercholesterolaemia; UGT1; syndrome; APP; PSEN1; antisense;
KW UDP-glucuronosyltransferase; amyloid precursor protein; presenilin-1;
KW Alzheimer's disease; cytostatic; antisickling; antianaemic; haemostatic;
KW antilipemic; ss.
XX
OS Homo sapiens.
XX
PN WO200173002-A2.
XX
PD 04-OCT-2001.
XX
PF 27-MAR-2001; 2001WO-US09761.
XX
PR 27-MAR-2000; 2000US-192176P.
PR 27-MAR-2000; 2000US-192179P.
PR 01-JUN-2000; 2000US-208538P.
PR 30-OCT-2000; 2000US-244989P.
XX
PA (UYDE) UNIV DELAWARE.

```
X
I   Kmiec EB,  Gamper HB,  Rice MC;
X
R   WPI; 2001-639230/73.
X
T   Oligonucleotide for targeted alterations of genetic sequences and for
T   treating cystic fibrosis, comprises at least one mismatch and chemical
T   modification -
X
S   Claim 7; Page 79; 294pp; English.
X
C   The present invention provides single-stranded oligonucleotides which can
C   be used for the targeted alteration of genomic sequences, where the
C   oligonucleotide has at least one mismatch compared with the genomic
C   sequence to be altered. In particular, these sequences are directed at
C   the following genes: adenosine deaminase, p53, beta-globin,
C   retinoblastoma, BRCA1, BRCA2, CFTR, cyclin-dependent kinase inhibitor 2A
C   (CDKN2A), APC, Factor V, Factor VIII, Factor IX, haemoglobin alpha locus
C   1 (HBA1), haemoglobin alpha locus 2 (HBA2), MLH1, MSH2, MSH6,
C   apolipoprotein E (APOE), LDL receptor (LDLR), UDP-glucuronosyltransferase
C   (UGT1), amyloid precursor protein (APC), presenilin-1 (PSEN1) and
C   presenilin-2 (PSEN2). These can be used in the gene therapy of diseases
C   such as cancer, adenosine deaminase deficiency, cystic fibrosis,
C   haemophilia, hypercholesterolaemia, thalassaemia, sickle cell anaemia,
C   Alzheimer's disease, melanoma, adenomatous polyposis of the colon and
C   various syndromes. The present sequence is one of the gene correcting
C   oligonucleotides of the invention.
X
Q   Sequence 17 BP; 9 A; 2 C; 1 G; 5 T; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
 Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y       1204 ATTAAACAAACAAA 1217
             ||||||||| ||||
b          3 ATTAAACAATCAAA 16


ESULT 808
BA77738/c
D   ABA77738 standard; DNA; 17 BP.
X
C   ABA77738;
X
T   24-JAN-2002  (first entry)
X
E   Retinoblastoma mutation correcting oligonucleotide SEQ ID NO: 584.
X
W   Human; gene therapy; adenosine deaminase deficiency; p53; beta-globin;
W   retinoblastoma; BRCA1; BRCA2; CFTR; cystic fibrosis; cancer; Factor V;
W   cyclin-dependent kinase inhibitor 2A; CDKN2A; melanoma; APC; HBA1; HBA2;
W   adenomatous polyposis of the colon; Factor VII; Factor IX; thrombosis;
W   haemophilia; alpha thalassaemia; haemoglobin alpha locus 1; MLH1; APOE;
W   mismatch repair; MSH2; MSH6; hyperlipidaemia; apolipoprotein E; LDLR;
W   familial hypercholesterolaemia; UGT1; syndrome; APP; PSEN1; antisense;
W   UDP-glucuronosyltransferase; amyloid precursor protein; presenilin-1;
W   Alzheimer's disease; cytostatic; antisickling; antianaemic; haemostatic;
W   antilipemic; ss.
X
S   Homo sapiens.
X
N   WO200173002-A2.
X
D   04-OCT-2001.
X
F   27-MAR-2001; 2001WO-US09761.
X
R   27-MAR-2000; 2000US-192176P.
R   27-MAR-2000; 2000US-192179P.
R   01-JUN-2000; 2000US-208538P.
R   30-OCT-2000; 2000US-244989P.
X
PA  (UYDE ) UNIV DELAWARE.
XX
PI  Kmiec EB,  Gamper HB,  Rice MC;
XX
DR  WPI; 2001-639230/73.
XX
PT  Oligonucleotide for targeted alterations of genetic sequences and for
PT  treating cystic fibrosis, comprises at least one mismatch and chemical
PT  modification -
XX
PS  Claim 7; Page 79; 294pp; English.
XX
CC  The present invention provides single-stranded oligonucleotides which can
CC  be used for the targeted alteration of genomic sequences, where the
CC  oligonucleotide has at least one mismatch compared with the genomic
CC  sequence to be altered. In particular, these sequences are directed at
CC  the following genes: adenosine deaminase, p53, beta-globin,
CC  retinoblastoma, BRCA1, BRCA2, CFTR, cyclin-dependent kinase inhibitor 2A
CC  (CDKN2A), APC, Factor V, Factor VIII, Factor IX, haemoglobin alpha locus
CC  1 (HBA1), haemoglobin alpha locus 2 (HBA2), MLH1, MSH2, MSH6,
CC  apolipoprotein E (APOE), LDL receptor (LDLR), UDP-glucuronosyltransferase
CC  (UGT1), amyloid precursor protein (APC), presenilin-1 (PSEN1) and
CC  presenilin-2 (PSEN2). These can be used in the gene therapy of diseases
CC  such as cancer, adenosine deaminase deficiency, cystic fibrosis,
CC  haemophilia, hypercholesterolaemia, thalassaemia, sickle cell anaemia,
CC  Alzheimer's disease, melanoma, adenomatous polyposis of the colon and
CC  various syndromes. The present sequence is one of the gene correcting
CC  oligonucleotides of the invention.
XX
SQ  Sequence 17 BP; 5 A; 1 C; 2 G; 9 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1204 ATTAAACAAACAAA 1217
             ||||||||| ||||
Db        15 ATTAAACAATCAAA 2


RESULT 809
ABA80208
ID  ABA80208 standard; DNA; 17 BP.
XX
AC  ABA80208;
XX
DT  24-JAN-2002  (first entry)
XX
DE  MLH1 mutation correcting oligonucleotide SEQ ID NO: 3054.
XX
KW  Human; gene therapy; adenosine deaminase deficiency; p53; beta-globin;
KW  retinoblastoma; BRCA1; BRCA2; CFTR; cystic fibrosis; cancer; Factor V;
KW  cyclin-dependent kinase inhibitor 2A; CDKN2A; melanoma; APC; HBA1; HBA2;
KW  adenomatous polyposis of the colon; Factor VII; Factor IX; thrombosis;
KW  haemophilia; alpha thalassaemia; haemoglobin alpha locus 1; MLH1; APOE;
KW  mismatch repair; MSH2; MSH6; hyperlipidaemia; apolipoprotein E; LDLR;
KW  familial hypercholesterolaemia; UGT1; syndrome; APP; PSEN1; antisense;
KW  UDP-glucuronosyltransferase; amyloid precursor protein; presenilin-1;
KW  Alzheimer's disease; cytostatic; antisickling; antianaemic; haemostatic;
KW  antilipemic; ss.
XX
OS  Homo sapiens.
XX
PN  WO200173002-A2.
XX
PD  04-OCT-2001.
XX
PF  27-MAR-2001; 2001WO-US09761.
XX
PR  27-MAR-2000; 2000US-192176P.
PR  27-MAR-2000; 2000US-192179P.
PR  01-JUN-2000; 2000US-208538P.
PR  30-OCT-2000; 2000US-244989P.
```

```
XX
PA   (UYDE ) UNIV DELAWARE.
XX
PI   Kmiec EB,  Gamper HB,  Rice MC;
XX
DR   WPI; 2001-639230/73.
XX
PT   Oligonucleotide for targeted alterations of genetic sequences and for
PT   treating cystic fibrosis, comprises at least one mismatch and chemical
PT   modification -
XX
PS   Claim 7; Page 213; 294pp; English.
XX
CC   The present invention provides single-stranded oligonucleotides which can
CC   be used for the targeted alteration of genomic sequences, where the
CC   oligonucleotide has at least one mismatch compared with the genomic
CC   sequence to be altered. In particular, these sequences are directed at
CC   the following genes: adenosine deaminase, p53, beta-globin,
CC   retinoblastoma, BRCA1, BRCA2, CFTR, cyclin-dependent kinase inhibitor 2A
CC   (CDKN2A), APC, Factor V, Factor VIII, Factor IX, haemoglobin alpha locus
CC   1 (HBA1), haemoglobin alpha locus 2 (HBA2), MLH1, MSH2, MSH6,
CC   apolipoprotein E (APOE), LDL receptor (LDLR), UDP-glucuronosyltransferase
CC   (UGT1), amyloid precursor protein (APC), presenilin-1 (PSEN1) and
CC   presenilin-2 (PSEN2). These can be used in the gene therapy of diseases
CC   such as cancer, adenosine deaminase deficiency, cystic fibrosis,
CC   haemophilia, hypercholesterolaemia, thalassaemia, sickle cell anaemia,
CC   Alzheimer's disease, melanoma, adenomatous polyposis of the colon and
CC   various syndromes. The present sequence is one of the gene correcting
CC   oligonucleotides of the invention.
XX
SQ   Sequence 17 BP; 6 A; 3 C; 3 G; 5 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        533 TTCAGTAAACAATG 546
              ||||||| ||||||
Db          4 TTCAGTACACAATG 17


RESULT 810
ABA80209/c
ID   ABA80209 standard; DNA; 17 BP.
XX
AC   ABA80209;
XX
DT   24-JAN-2002  (first entry)
XX
DE   MLH1 mutation correcting oligonucleotide SEQ ID NO: 3055.
XX
KW   Human; gene therapy; adenosine deaminase deficiency; p53; beta-globin;
KW   retinoblastoma; BRCA1; BRCA2; CFTR; cystic fibrosis; cancer; Factor V;
KW   cyclin-dependent kinase inhibitor 2A; CDKN2A; melanoma; APC; HBA1; HBA2;
KW   adenomatous polyposis of the colon; Factor VII; Factor IX; thrombosis;
KW   haemophilia; alpha thalassaemia; haemoglobin alpha locus 1; MLH1; APOE;
KW   mismatch repair; MSH2; MSH6; hyperlipidaemia; apolipoprotein E; LDLR;
KW   familial hypercholesterolaemia; UGT1; syndrome; APP; PSEN1; antisense;
KW   UDP-glucuronosyltransferase; amyloid precursor protein; presenilin-1;
KW   Alzheimer's disease; cytostatic; antisickling; antianaemic; haemostatic;
KW   antilipemic; ss.
XX
OS   Homo sapiens.
XX
PN   WO200173002-A2.
XX
PD   04-OCT-2001.
XX
PF   27-MAR-2001; 2001WO-US09761.
XX
PR   27-MAR-2000; 2000US-192176P.
PR   27-MAR-2000; 2000US-192179P.
PR   01-JUN-2000; 2000US-208538P.
PR   30-OCT-2000; 2000US-244989P.
XX
PA   (UYDE ) UNIV DELAWARE.
XX
PI   Kmiec EB,  Gamper HB,  Rice MC;
XX
DR   WPI; 2001-639230/73.
XX
PT   Oligonucleotide for targeted alterations of genetic sequences and for
PT   treating cystic fibrosis, comprises at least one mismatch and chemical
PT   modification -
XX
PS   Claim 7; Page 213; 294pp; English.
XX
CC   The present invention provides single-stranded oligonucleotides which can
CC   be used for the targeted alteration of genomic sequences, where the
CC   oligonucleotide has at least one mismatch compared with the genomic
CC   sequence to be altered. In particular, these sequences are directed at
CC   the following genes: adenosine deaminase, p53, beta-globin,
CC   retinoblastoma, BRCA1, BRCA2, CFTR, cyclin-dependent kinase inhibitor 2A
CC   (CDKN2A), APC, Factor V, Factor VIII, Factor IX, haemoglobin alpha locus
CC   1 (HBA1), haemoglobin alpha locus 2 (HBA2), MLH1, MSH2, MSH6,
CC   apolipoprotein E (APOE), LDL receptor (LDLR), UDP-glucuronosyltransferase
CC   (UGT1), amyloid precursor protein (APC), presenilin-1 (PSEN1) and
CC   presenilin-2 (PSEN2). These can be used in the gene therapy of diseases
CC   such as cancer, adenosine deaminase deficiency, cystic fibrosis,
CC   haemophilia, hypercholesterolaemia, thalassaemia, sickle cell anaemia,
CC   Alzheimer's disease, melanoma, adenomatous polyposis of the colon and
CC   various syndromes. The present sequence is one of the gene correcting
CC   oligonucleotides of the invention.
XX
SQ   Sequence 17 BP; 5 A; 3 C; 3 G; 6 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        533 TTCAGTAAACAATG 546
              ||||||| ||||||
Db         14 TTCAGTACACAATG 1


RESULT 811
AAH74941
ID   AAH74941 standard; DNA; 17 BP.
XX
AC   AAH74941;
XX
DT   29-OCT-2001  (first entry)
XX
DE   Nucleotide sequence identified using ligation-based DNA sequencing.
XX
KW   Nucleotide sequence signature; nucleotide sequencing; ss.
XX
OS   Unidentified.
XX
PN   WO200161044-A1.
XX
PD   23-AUG-2001.
XX
PF   15-FEB-2001; 2001WO-US05032.
XX
PR   15-FEB-2000; 2000US-0182454.
PR   01-SEP-2000; 2000US-0654187.
XX
PA   (LYNX-) LYNX THERAPEUTICS INC.
XX
PI   Corcoran KC,  Eletr S;
XX
DR   WPI; 2001-522608/57.
XX
PT   Determining nucleotide sequence signature, by obtaining optical values
PT   for each nucleotide position in a group, adjusting them to get ratio of
```

```
PT   final highest values near predetermined factor, generating base call -
XX
PS   Disclosure; Fig 120; 73pp; English.
XX
CC   The specification describes a method for determining a nucleotide
CC   sequence signature. The method comprises obtaining optical measurements
CC   with values indicating each nucleotide in a group of nucleotide
CC   positions, adjusting the values until the ratio of highest value in
CC   the set to next highest values in the set is at least a predetermined
CC   factor, and generating a base call for a position in the group based
CC   on results after the adjustment of values. The method is used for
CC   determining a signature of a nucleotide sequence, and for determining
CC   a nucleotide sequence of a polynucleotide from a series of optical
CC   measurements. AAH74933-50 represent yeast sequences, identified using
CC   the method of the invention.
XX
SQ   Sequence 17 BP; 5 A; 2 C; 2 G; 8 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1149 TTATTTTAGATATT 1162
              |||||||||||||
Db          3 TCATTTTAGATATT 16


RESULT 812
AAH91169
ID   AAH91169 standard; DNA; 17 BP.
XX
AC   AAH91169;
XX
DT   09-OCT-2001  (first entry)
XX
DE   Human inflammatory bowel disease associated polymorphic site #244.
XX
KW   Human; inflammatory bowel disease; Crohn's disease; ulcerative colitis;
KW   single nucleotide polymorphism; SNP; chromosome 19p13; paternity test;
KW   chromosome 5q31-33; forensic test; gene therapy; ds.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    11
FT                   /*tag=  a
FT                   /note= "SNP, optionally A or T at this position"
FT
XX   WO200142511-A2.
XX
PD   14-JUN-2001.
XX
PF   11-DEC-2000; 2000WO-US33632.
XX
PR   10-DEC-1999;   99US-0170257.
PR   10-APR-2000; 2000US-0196046.
XX
PA   (WHED ) WHITEHEAD INST BIOMEDICAL RES.
PA   (ELLI-) ELLIPSIS BIOTHERAPEUTICS CORP.
XX
PI   Daly M,  Hudson TJ,  Lander ES,  Rioux J,  Siminovitch K;
XX
DR   WPI; 2001-367874/38.
XX
PT   Testing for the presence of polymorphisms associated with inflammatory
PT   bowel disease, using a hybridization assay -
XX
PS   Claim 1; Page 49; 463pp; English.
XX
CC   The present invention describes a method for detecting the presence of
CC   polymorphisms associated with inflammatory bowel diseases such as
CC   ulcerative colitis and Crohn's disease. The methods can be used to detect
CC   the presence of genetic polymorphisms associated with inflammatory bowel
CC   disease and correlating their occurrence with disease states. They may be
CC   used in this way for phenotypic correlations, forensics, paternity
CC   testing, medicine and genetic analysis. The present sequence is a
CC   polymorphic site described in the exemplification of the invention.
XX
SQ   Sequence 17 BP; 3 A; 4 C; 1 G; 8 T; 1 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   86.7%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1555 TCTCCAAATTTTTTT 1569
              ||||||| ||||||
Db          3 TCTCCAACNTTTTTT 17


RESULT 813
AAH94872
ID   AAH94872 standard; RNA; 17 BP.
XX
AC   AAH94872;
XX
DT   09-OCT-2001  (first entry)
XX
DE   Human Chk1 ribozyme substrate SEQ ID NO: 297.
XX
KW   Human; checkpoint kinase-1; Chk1; antisense; ribozyme; gene therapy;
KW   RNA cleavage; cancer; ss.
XX
OS   Homo sapiens.
XX
PN   WO200157206-A2.
XX
PD   09-AUG-2001.
XX
PF   02-FEB-2001; 2001WO-US03504.
XX
PR   03-FEB-2000; 2000US-0179983.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
PA   (FATT/) FATTAEY A R.
XX
PI   Fattaey AR,  Jarvis T,  McSwiggen J,  Booher RN,  Holman PS;
XX
DR   WPI; 2001-496922/54.
XX
PT   Novel nucleic acid molecule e.g., ribozymes or antisense nucleic acid
PT   molecules, which downregulates expression of a checkpoint kinase-1
PT   gene, useful for treating colorectal, lung, breast or prostate cancers
PT   -
XX
PS   Claim 4; Page 58; 115pp; English.
XX
CC   The present invention provides nucleic acid molecules capable of
CC   downregulating the expression of the human checkpoint kinase-1 (Chk1)
CC   gene. These may be antisense or ribozyme sequences, and are useful in the
CC   treatment of diseases associated with conditions affected by Chk1 levels,
CC   including cancer. The present sequence is an oligonucleotide described in
CC   the exemplification of the invention.
XX
SQ   Sequence 17 BP; 3 A; 2 C; 1 G; 11 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   21.4%;  Pred. No. 5.1e+02;
  Matches    3;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1141 AATTTATTTTATTT 1154
              ||:::|:::: :::
Db          4 AAUUUAUUUUGUUU 17


RESULT 814
AAH94873
```

ID AAH94873 standard; RNA; 17 BP.
XX
AC AAH94873;
XX
DT 09-OCT-2001 (first entry)
XX
DE Human Chk1 ribozyme substrate SEQ ID NO: 298.
XX
KW Human; checkpoint kinase-1; Chk1; antisense; ribozyme; gene therapy;
KW RNA cleavage; cancer; ss.
XX
OS Homo sapiens.
XX
PN WO200157206-A2.
XX
PD 09-AUG-2001.
XX
PF 02-FEB-2001; 2001WO-US03504.
XX
PR 03-FEB-2000; 2000US-0179983.
XX
PA (RIBO-) RIBOZYME PHARM INC.
PA (FATT/) FATTAEY A R.
XX
PI Fattaey AR, Jarvis T, McSwiggen J, Booher RN, Holman PS;
XX
DR WPI; 2001-496922/54.
XX
PT Novel nucleic acid molecule e.g., ribozymes or antisense nucleic acid
PT molecules, which downregulates expression of a checkpoint kinase-1
PT gene, useful for treating colorectal, lung, breast or prostate cancers
PT -
XX
PS Claim 4; Page 58; 115pp; English.
XX
CC The present invention provides nucleic acid molecules capable of
CC downregulating the expression of the human checkpoint kinase-1 (Chk1)
CC gene. These may be antisense or ribozyme sequences, and are useful in the
CC treatment of diseases associated with conditions affected by Chk1 levels,
CC including cancer. The present sequence is an oligonucleotide described in
CC the exemplification of the invention.
XX
SQ Sequence 17 BP; 3 A; 1 C; 2 G; 11 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 21.4%; Pred. No. 5.1e+02;
Matches 3; Conservative 10; Mismatches 1; Indels 0; Gaps 0;

Qy 1141 AATTTATTTTATTT 1154
||:::|:::: :::
Db 2 AAUUUAUUUUGUUU 15

RESULT 815
AAH94874
ID AAH94874 standard; RNA; 17 BP.
XX
AC AAH94874;
XX
DT 09-OCT-2001 (first entry)
XX
DE Human Chk1 ribozyme substrate SEQ ID NO: 299.
XX
KW Human; checkpoint kinase-1; Chk1; antisense; ribozyme; gene therapy;
KW RNA cleavage; cancer; ss.
XX
OS Homo sapiens.
XX
PN WO200157206-A2.
XX
PD 09-AUG-2001.
XX
PF 02-FEB-2001; 2001WO-US03504.
XX
PR 03-FEB-2000; 2000US-0179983.
XX
PA (RIBO-) RIBOZYME PHARM INC.
PA (FATT/) FATTAEY A R.
XX
PI Fattaey AR, Jarvis T, McSwiggen J, Booher RN, Holman PS;
XX
DR WPI; 2001-496922/54.
XX
PT Novel nucleic acid molecule e.g., ribozymes or antisense nucleic acid
PT molecules, which downregulates expression of a checkpoint kinase-1
PT gene, useful for treating colorectal, lung, breast or prostate cancers
PT -
XX
PS Claim 4; Page 58; 115pp; English.
XX
CC The present invention provides nucleic acid molecules capable of
CC downregulating the expression of the human checkpoint kinase-1 (Chk1)
CC gene. These may be antisense or ribozyme sequences, and are useful in the
CC treatment of diseases associated with conditions affected by Chk1 levels,
CC including cancer. The present sequence is an oligonucleotide described in
CC the exemplification of the invention.
XX
SQ Sequence 17 BP; 3 A; 0 C; 2 G; 12 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 21.4%; Pred. No. 5.1e+02;
Matches 3; Conservative 10; Mismatches 1; Indels 0; Gaps 0;

Qy 1141 AATTTATTTTATTT 1154
||:::|:::: :::
Db 1 AAUUUAUUUUGUUU 14

RESULT 816
AAH95728
ID AAH95728 standard; RNA; 17 BP.
XX
AC AAH95728;
XX
DT 09-OCT-2001 (first entry)
XX
DE Human Chk1 ribozyme substrate SEQ ID NO: 1153.
XX
KW Human; checkpoint kinase-1; Chk1; antisense; ribozyme; gene therapy;
KW RNA cleavage; cancer; ss.
XX
OS Homo sapiens.
XX
PN WO200157206-A2.
XX
PD 09-AUG-2001.
XX
PF 02-FEB-2001; 2001WO-US03504.
XX
PR 03-FEB-2000; 2000US-0179983.
XX
PA (RIBO-) RIBOZYME PHARM INC.
PA (FATT/) FATTAEY A R.
XX
PI Fattaey AR, Jarvis T, McSwiggen J, Booher RN, Holman PS;
XX
DR WPI; 2001-496922/54.
XX
PT Novel nucleic acid molecule e.g., ribozymes or antisense nucleic acid
PT molecules, which downregulates expression of a checkpoint kinase-1
PT gene, useful for treating colorectal, lung, breast or prostate cancers
PT -
XX
PS Claim 4; Page 81; 115pp; English.
XX
CC The present invention provides nucleic acid molecules capable of

```
C   downregulating the expression of the human checkpoint kinase-1 (Chk1)
C   gene. These may be antisense or ribozyme sequences, and are useful in the
C   treatment of diseases associated with conditions affected by Chk1 levels,
C   including cancer. The present sequence is an oligonucleotide described in
C   the exemplification of the invention.
K
)   Sequence 17 BP; 3 A; 2 C; 1 G; 11 U; 0 other;

 Query Match              1.0%;  Score 12.4;  DB 1;  Length 17;
 Best Local Similarity   21.4%;  Pred. No. 5.1e+02;
 Matches    3;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

/       1141 AATTTATTTTATTT 1154
             ||:::|:::: :::
>          4 AAUUUAUUUUGUUU 17


ESULT 817
AF26858
)   AAF26858 standard; DNA; 17 BP.
K
:   AAF26858;
K
I   09-APR-2001  (first entry)
K
E   SR alpha sequence SV40 promoter sequence SEQ ID NO:1.
K
K   Simian virus 40; SV40; SR-alpha; promoter; regulatory sequence;
W   expression vector; ds.
K
S   Rhesus macaque polyoma virus.
K
N   WO200077231-A1.
K
D   21-DEC-2000.
K
F   16-JUN-2000; 2000WO-JP03956.
X
R   16-JUN-1999;  99JP-0170355.
X
A   (MEIP ) MEIJI MILK PROD CO LTD.
A   (REIN-) RES INST INNOVATIVE TECHNOLOGY EARTH.
X
I   Nakamichi N,  Hirota Y,  Ito M,  Maeda T,  Yan H,  Matsumura T;
X
R   WPI; 2001-112226/12.
X
T   Regulatory sequences for constructing recombinant expression vector for
T   animal cells, with expression efficiency to produce eg. protein drugs
T   in high yield with selectivity safety and rapidity but without
T   self-replication  -
X
S   Claim 4; Page 23; 80pp; Japanese.
X
C   The present invention describes a DNA (I) comprising an SR-alpha
C   promoter enhancer sequence (SRalpha sequence) constructed from an
C   SV40-originated replication starting point, an enhancer sequence and
C   an initiation promoter sequence. (I) further comprises an HTLV-1
C   originated LTR-R sequence and a part of the U5 sequence (U' sequence),
C   with the ligation of a post-transcriptional regulatory sequence
C   (SRalphaSP sequence) through an SV40 late stage mRNA splice signal
C   sequence (Sp sequence) to the 3'-downstream in which an ATG sequence is
C   modified by GCA sequence in the Sp sequence in the transcription to give
C   the post-transcription regulatory sequence. Such produced animal cells
C   have expression efficiency, including transcription and translation, to
C   produce e.g. protein drugs in high yield with selectivity safety and
C   rapidity but without self-replication in presence of T antigen. The
C   regulatory sequences are for constructing recombinant expression vector
C   for use with animal cells. Such produced animal cells have expression
C   efficiency, including transcription and translation, to produce e.g.
C   protein drugs in high yield with selectivity safety and rapidity but
C   without self-replication in presence of T antigen. The present sequence
C   represents an SR-alpha sequence SV40 promoter sequence which is given
CC  in the exemplification of the present invention.
XX
SQ  Sequence 17 BP; 4 A; 0 C; 0 G; 13 T; 0 other;

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1141 AATTTATTTTATTT 1154
              ||||| ||||||||
Db          2 AATTTTTTTTATTT 15


RESULT 818
ABK00458/c
ID  ABK00458 standard; RNA; 17 BP.
XX
AC  ABK00458;
XX
DT  12-MAR-2002  (first entry)
XX
DE  Human NOGO Hammerhead Ribozyme #458.
XX
KW  Human; ss; antisense therapy; cytostatic; antiinflammatory; haemostatic;
KW  cerebroprotective; nootropic; neuroprotective; antiparkinsonian;
KW  muscular; CD20; neurite growth inhibitor gene; NOGO; hammerhead ribozyme;
KW  DNAzyme; inozyme; G-cleaver; amberzyme; zinzyme; lymphoma; leukaemia;
KW  B-cell lymphoma; non-Hodgkin's lymphoma; NHL; lymphocytic leukaemia;
KW  human immunodeficiency virus; HIV associated NHL; mantle-cell lymphoma;
KW  MCL; immunocytoma; IMC; immune thrombocytopaenia; stroke; dementia;
KW  inflammatory arthropathy; central nervous system injury;
KW  cerebrovascular accident; CVA; Alzheimer's disease; multiple sclerosis;
KW  chemotherapy-induced neuropathy; amyotrophic lateral sclerosis; ALS;
KW  Parkinson's disease; ataxia; Huntington's disease;
KW  Creutzfeldt-Jakob disease; muscular dystrophy; neurodegenerative disease.
XX
OS  Homo sapiens.
OS  Synthetic.
XX
PN  WO200159103-A2.
XX
PD  16-AUG-2001.
XX
PF  09-FEB-2001; 2001WO-US04273.
XX
PR  11-FEB-2000; 2000US-181797P.
PR  28-FEB-2000; 2000US-185516P.
PR  06-MAR-2000; 2000US-187128P.
XX
PA  (RIBO-) RIBOZYME PHARM INC.
PA  (BLAT/) BLATT L.
PA  (MCSW/) MCSWIGGEN J.
PA  (CHOW/) CHOWRIRA B M.
XX
PI  Blatt L,  McSwiggen J,  Chowrira BM;
XX
DR  WPI; 2001-607195/69.
XX
PT  Nucleic acid molecules, e.g., enzymatic nucleic acids and antisense
PT  constructs, which down regulate expression of a CD20 gene or neurite
PT  growth inhibitor gene useful for treating, e.g., lymphoma, leukemia,
PT  and central nervous system injury  -
XX
PS  Claim 88; Page 73; 200pp; English.
XX
CC  The invention relates to a nucleic acid molecule which down regulates
CC  expression of a CD20 gene and a nucleic acid molecule which down
CC  regulates expression of a neurite growth inhibitor gene (NOGO).
CC  The nucleic acids may be enzymatic nucleic acids (e.g. a ribozyme or a
CC  DNAzyme) an Inozyme (an endolytic nucleic acid cleaving a an RNA molecule
CC  possessing an NCH motif), a G-cleaver (cleaving RNA with a NYN
CC  motif) pr an amberzyme (cleaving RNA with an NGN triplet), a zinzyme
CC  (cleaving RNA with a YGY motif). The CD20-targetting nucleic acid is used
```

```
CC   to cleave RNA of CD20 in the presence of a divalent cation that is
CC   preferably Mg^2^+. Furthermore, it may be contacted with a cell to reduce
CC   CD20 activity of the cell and treat a patient having a condition
CC   associated with the level of CD20. The treatment may further comprise the
CC   use of one or more therapies. In particular, the CD20 targetting
CC   nucleic acid may be used to treat lymphoma, leukaemia, B-cell
CC   lymphoma, low-grade or follicular non-Hodgkin's lymphoma (NHL), bulky
CC   low-grade or follicular NHL, lymphocytic leukaemia, HIV (human
CC   immunodeficiency virus) associated NHL, mantle-cell lymphoma (MCL),
CC   immunocytoma (IMC), small B-cell lymphocytic lymphoma, immune
CC   thrombocytopaenia, and inflammatory arthropathy. The NOGO-targetting
CC   nucleic acid is used to cleave RNA of the NOGO gene in the presence of a
CC   divalent cation that is preferably Mg^2^+. Furthermore, the nucleic acid
CC   may be contacted with a cell to reduce NOGO activity of the cell and
CC   treat a patient having a condition associated with the level of NOGO. The
CC   treatment may further comprise the use of one or more therapies.
CC   In particular, the NOGO-targetting nucleic acid may be used to treat
CC   central nervous system (CNS) injury and cerebrovascular accident (CVA,
CC   stroke), Alzheimer's disease, dementia, multiple sclerosis (MS),
CC   chemotherapy-induced neuropathy, amyotrophic lateral sclerosis (ALS),
CC   Parkinson's disease, ataxia, Huntington's disease, Creutzfeldt-Jakob
CC   disease, muscular dystrophy, and/or other neurodegenerative disease
CC   states which respond to the modulation of NOGO expression. The
CC   present sequence is a hammerhead ribozyme of the invention.
XX
SQ   Sequence 17 BP; 5 A; 2 C; 1 G; 9 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1096 TAGAAGATGAATCA 1109
              ||||| ||||||||
Db         14 TAGAAAATGAATCA 1

RESULT 819
ABK01127
ID   ABK01127 standard; RNA; 17 BP.
XX
AC   ABK01127;
XX
DT   12-MAR-2002  (first entry)
XX
DE   Human NOGO Inozyme #397.
XX
KW   Human; ss; antisense therapy; cytostatic; antiinflammatory; haemostatic;
KW   cerebroprotective; nootropic; neuroprotective; antiparkinsonian;
KW   muscular; CD20; neurite growth inhibitor gene; NOGO; hammerhead ribozyme;
KW   DNAzyme; inozyme; G-cleaver; amberzyme; zinzyme; lymphoma; leukaemia;
KW   B-cell lymphoma; non-Hodgkin's lymphoma; NHL; lymphocytic leukaemia;
KW   human immunodeficiency virus; HIV associated NHL; mantle-cell lymphoma;
KW   MCL; immunocytoma; IMC; immune thrombocytopaenia; stroke; dementia;
KW   inflammatory arthropathy; central nervous system injury;
KW   cerebrovascular accident; CVA; Alzheimer's disease; multiple sclerosis;
KW   chemotherapy-induced neuropathy; amyotrophic lateral sclerosis; ALS;
KW   Parkinson's disease; ataxia; Huntington's disease;
KW   Creutzfeldt-Jakob disease; muscular dystrophy; neurodegenerative disease.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200159103-A2.
XX
PD   16-AUG-2001.
XX
PF   09-FEB-2001; 2001WO-US04273.
XX
PR   11-FEB-2000; 2000US-181797P.
PR   28-FEB-2000; 2000US-185516P.
PR   06-MAR-2000; 2000US-187128P.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
PA   (BLAT/) BLATT L.
PA   (MCSW/) MCSWIGGEN J.
PA   (CHOW/) CHOWRIRA B M.
XX
PI   Blatt L,  McSwiggen J,  Chowrira BM;
XX
DR   WPI; 2001-607195/69.
XX
PT   Nucleic acid molecules, e.g., enzymatic nucleic acids and antisense
PT   constructs, which down regulate expression of a CD20 gene or neurite
PT   growth inhibitor gene useful for treating, e.g., lymphoma, leukemia,
PT   and central nervous system injury -
XX
PS   Claim 88; Page 84; 200pp; English.
XX
CC   The invention relates to a nucleic acid molecule which down regulates
CC   expression of a CD20 gene and a nucleic acid molecule which down
CC   regulates expression of a neurite growth inhibitor gene (NOGO).
CC   The nucleic acids may be enzymatic nucleic acids (e.g. a ribozyme or a
CC   DNAzyme) an Inozyme (an endolytic nucleic acid cleaving a an RNA molecule
CC   possessing an NCH motif), a G-cleaver (cleaving RNA with a NYN
CC   motif) pr an amberzyme (cleaving RNA with an NGN triplet), a zinzyme
CC   (cleaving RNA with a YGY motif). The CD20-targetting nucleic acid is used
CC   to cleave RNA of CD20 in the presence of a divalent cation that is
CC   preferably Mg^2^+. Furthermore, it may be contacted with a cell to reduce
CC   CD20 activity of the cell and treat a patient having a condition
CC   associated with the level of CD20. The treatment may further comprise the
CC   use of one or more therapies. In particular, the CD20 targetting
CC   nucleic acid may be used to treat lymphoma, leukaemia, B-cell
CC   lymphoma, low-grade or follicular non-Hodgkin's lymphoma (NHL), bulky
CC   low-grade or follicular NHL, lymphocytic leukaemia, HIV (human
CC   immunodeficiency virus) associated NHL, mantle-cell lymphoma (MCL),
CC   immunocytoma (IMC), small B-cell lymphocytic lymphoma, immune
CC   thrombocytopaenia, and inflammatory arthropathy. The NOGO-targetting
CC   nucleic acid is used to cleave RNA of the NOGO gene in the presence of a
CC   divalent cation that is preferably Mg^2^+. Furthermore, the nucleic acid
CC   may be contacted with a cell to reduce NOGO activity of the cell and
CC   treat a patient having a condition associated with the level of NOGO. The
CC   treatment may further comprise the use of one or more therapies.
CC   In particular, the NOGO-targetting nucleic acid may be used to treat
CC   central nervous system (CNS) injury and cerebrovascular accident (CVA,
CC   stroke), Alzheimer's disease, dementia, multiple sclerosis (MS),
CC   chemotherapy-induced neuropathy, amyotrophic lateral sclerosis (ALS),
CC   Parkinson's disease, ataxia, Huntington's disease, Creutzfeldt-Jakob
CC   disease, muscular dystrophy, and/or other neurodegenerative disease
CC   states which respond to the modulation of NOGO expression. The
CC   present sequence is an inozyme of the invention.
XX
SQ   Sequence 17 BP; 7 A; 3 C; 2 G; 5 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   64.3%;  Pred. No. 5.1e+02;
  Matches    9;  Conservative    4;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        623 ACAACAAATAATTT 636
              |||||| |:||:::
Db          4 ACAACAGAUAAUUU 17

RESULT 820
ABK02182
ID   ABK02182 standard; RNA; 17 BP.
XX
AC   ABK02182;
XX
DT   12-MAR-2002  (first entry)
XX
DE   Human NOGO DNAzyme #94.
XX
KW   Human; ss; antisense therapy; cytostatic; antiinflammatory; haemostatic;
KW   cerebroprotective; nootropic; neuroprotective; antiparkinsonian;
KW   muscular; CD20; neurite growth inhibitor gene; NOGO; hammerhead ribozyme;
KW   DNAzyme; inozyme; G-cleaver; amberzyme; zinzyme; lymphoma; leukaemia;
```

B-cell lymphoma; non-Hodgkin's lymphoma; NHL; lymphocytic leukaemia; human immunodeficiency virus; HIV associated NHL; mantle-cell lymphoma; MCL; immunocytoma; IMC; immune thrombocytopaenia; stroke; dementia; inflammatory arthropathy; central nervous system injury; cerebrovascular accident; CVA; Alzheimer's disease; multiple sclerosis; chemotherapy-induced neuropathy; amyotrophic lateral sclerosis; ALS; Parkinson's disease; ataxia; Huntington's disease; Creutzfeldt-Jakob disease; muscular dystrophy; neurodegenerative disease.

Homo sapiens.
Synthetic.

WO200159103-A2.

16-AUG-2001.

09-FEB-2001; 2001WO-US04273.

11-FEB-2000; 2000US-181797P.
28-FEB-2000; 2000US-185516P.
06-MAR-2000; 2000US-187128P.

(RIBO-) RIBOZYME PHARM INC.
(BLAT/) BLATT L.
(MCSW/) MCSWIGGEN J.
(CHOW/) CHOWRIRA B M.

Blatt L, McSwiggen J, Chowrira BM;

WPI; 2001-607195/69.

Nucleic acid molecules, e.g., enzymatic nucleic acids and antisense constructs, which down regulate expression of a CD20 gene or neurite growth inhibitor gene useful for treating, e.g., lymphoma, leukemia, and central nervous system injury -

Claim 88; Page 114; 200pp; English.

The invention relates to a nucleic acid molecule which down regulates expression of a CD20 gene and a nucleic acid molecule which down regulates expression of a neurite growth inhibitor gene (NOGO). The nucleic acids may be enzymatic nucleic acids (e.g. a ribozyme or a DNAzyme) an Inozyme (an endolytic nucleic acid cleaving a an RNA molecule possessing an NCH motif), a G-cleaver (cleaving RNA with a NYN motif) pr an amberzyme (cleaving RNA with an NGN triplet), a zinzyme (cleaving RNA with a YGY motif). The CD20-targetting nucleic acid is used to cleave RNA of CD20 in the presence of a divalent cation that is preferably Mg^2^+. Furthermore, it may be contacted with a cell to reduce CD20 activity of the cell and treat a patient having a condition associated with the level of CD20. The treatment may further comprise the use of one or more therapies. In particular, the CD20 targetting nucleic acid may be used to treat lymphoma, leukaemia, B-cell lymphoma, low-grade or follicular non-Hodgkin's lymphoma (NHL), bulky low-grade or follicular NHL, lymphocytic leukaemia, HIV (human immunodeficiency virus) associated NHL, mantle-cell lymphoma (MCL), immunocytoma (IMC), small B-cell lymphocytic lymphoma, immune thrombocytopaenia, and inflammatory arthropathy. The NOGO-targetting nucleic acid is used to cleave RNA of the NOGO gene in the presence of a divalent cation that is preferably Mg^2^+. Furthermore, the nucleic acid may be contacted with a cell to reduce NOGO activity of the cell and treat a patient having a condition associated with the level of NOGO. The treatment may further comprise the use of one or more therapies. In particular, the NOGO-targetting nucleic acid may be used to treat central nervous system (CNS) injury and cerebrovascular accident (CVA, stroke), Alzheimer's disease, dementia, multiple sclerosis (MS), chemotherapy-induced neuropathy, amyotrophic lateral sclerosis (ALS), Parkinson's disease, ataxia, Huntington's disease, Creutzfeldt-Jakob disease, muscular dystrophy, and/or other neurodegenerative disease states which respond to the modulation of NOGO expression. The present sequence is a DNAzyme molecule of the invention.

Sequence 17 BP; 9 A; 3 C; 1 G; 4 U; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   64.3%;  Pred. No. 5.1e+02;
  Matches    9;  Conservative    4;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        623 ACAACAAATAATTT 636
              |||||| |:||:::
Db          2 ACAACAGAUAAUUU 15
```

RESULT 821
ABK02524
ID ABK02524 standard; RNA; 17 BP.
XX
AC ABK02524;
XX
DT 12-MAR-2002 (first entry)
XX
DE Human NOGO Amberzyme #196.
XX
KW Human; ss; antisense therapy; cytostatic; antiinflammatory; haemostatic;
KW cerebroprotective; nootropic; neuroprotective; antiparkinsonian;
KW muscular; CD20; neurite growth inhibitor gene; NOGO; hammerhead ribozyme;
KW DNAzyme; inozyme; G-cleaver; amberzyme; zinzyme; lymphoma; leukaemia;
KW B-cell lymphoma; non-Hodgkin's lymphoma; NHL; lymphocytic leukaemia;
KW human immunodeficiency virus; HIV associated NHL; mantle-cell lymphoma;
KW MCL; immunocytoma; IMC; immune thrombocytopaenia; stroke; dementia;
KW inflammatory arthropathy; central nervous system injury;
KW cerebrovascular accident; CVA; Alzheimer's disease; multiple sclerosis;
KW chemotherapy-induced neuropathy; amyotrophic lateral sclerosis; ALS;
KW Parkinson's disease; ataxia; Huntington's disease;
KW Creutzfeldt-Jakob disease; muscular dystrophy; neurodegenerative disease.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO200159103-A2.
XX
PD 16-AUG-2001.
XX
PF 09-FEB-2001; 2001WO-US04273.
XX
PR 11-FEB-2000; 2000US-181797P.
PR 28-FEB-2000; 2000US-185516P.
PR 06-MAR-2000; 2000US-187128P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
PA (BLAT/) BLATT L.
PA (MCSW/) MCSWIGGEN J.
PA (CHOW/) CHOWRIRA B M.
XX
PI Blatt L, McSwiggen J, Chowrira BM;
XX
DR WPI; 2001-607195/69.
XX
PT Nucleic acid molecules, e.g., enzymatic nucleic acids and antisense
PT constructs, which down regulate expression of a CD20 gene or neurite
PT growth inhibitor gene useful for treating, e.g., lymphoma, leukemia,
PT and central nervous system injury -
XX
PS Claim 88; Page 135; 200pp; English.
XX
CC The invention relates to a nucleic acid molecule which down regulates
CC expression of a CD20 gene and a nucleic acid molecule which down
CC regulates expression of a neurite growth inhibitor gene (NOGO).
CC The nucleic acids may be enzymatic nucleic acids (e.g. a ribozyme or a
CC DNAzyme) an Inozyme (an endolytic nucleic acid cleaving a an RNA molecule
CC possessing an NCH motif), a G-cleaver (cleaving RNA with a NYN
CC motif) pr an amberzyme (cleaving RNA with an NGN triplet), a zinzyme
CC (cleaving RNA with a YGY motif). The CD20-targetting nucleic acid is used
CC to cleave RNA of CD20 in the presence of a divalent cation that is
CC preferably Mg^2^+. Furthermore, it may be contacted with a cell to reduce
CC CD20 activity of the cell and treat a patient having a condition
CC associated with the level of CD20. The treatment may further comprise the

CC use of one or more therapies. In particular, the CD20 targetting
CC nucleic acid may be used to treat lymphoma, leukaemia, B-cell
CC lymphoma, low-grade or follicular non-Hodgkin's lymphoma (NHL), bulky
CC low-grade or follicular NHL, lymphocytic leukaemia, HIV (human
CC immunodeficiency virus) associated NHL, mantle-cell lymphoma (MCL),
CC immunocytoma (IMC), small B-cell lymphocytic lymphoma, immune
CC thrombocytopaenia, and inflammatory arthropathy. The NOGO-targetting
CC nucleic acid is used to cleave RNA of the NOGO gene in the presence of a
C divalent cation that is preferably Mg^2^+. Furthermore, the nucleic acid
C may be contacted with a cell to reduce NOGO activity of the cell and
C treat a patient having a condition associated with the level of NOGO. The
C treatment may further comprise the use of one or more therapies.
C In particular, the NOGO-targetting nucleic acid may be used to treat
C central nervous system (CNS) injury and cerebrovascular accident (CVA,
C stroke), Alzheimer's disease, dementia, multiple sclerosis (MS),
C chemotherapy-induced neuropathy, amyotrophic lateral sclerosis (ALS),
C Parkinson's disease, ataxia, Huntington's disease, Creutzfeldt-Jakob
C disease, muscular dystrophy, and/or other neurodegenerative disease
C states which respond to the modulation of NOGO expression. The
C present sequence is an amberzyme molecule of the invention.
X
SQ Sequence 17 BP; 8 A; 3 C; 1 G; 5 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 64.3%; Pred. No. 5.1e+02;
Matches 9; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 623 ACAACAAATAATTT 636
|||||| |:||:::
Db 3 ACAACAGAUAAUUU 16

RESULT 822
ABK02556
ID ABK02556 standard; RNA; 17 BP.
X
AC ABK02556;
X
DT 12-MAR-2002 (first entry)
X
DE Human NOGO Amberzyme #228.
X
KW Human; ss; antisense therapy; cytostatic; antiinflammatory; haemostatic;
KW cerebroprotective; nootropic; neuroprotective; antiparkinsonian;
KW muscular; CD20; neurite growth inhibitor gene; NOGO; hammerhead ribozyme;
KW DNAzyme; inozyme; G-cleaver; amberzyme; zinzyme; lymphoma; leukaemia;
KW B-cell lymphoma; non-Hodgkin's lymphoma; NHL; lymphocytic leukaemia;
KW human immunodeficiency virus; HIV associated NHL; mantle-cell lymphoma;
KW MCL; immunocytoma; IMC; immune thrombocytopaenia; stroke; dementia;
KW inflammatory arthropathy; central nervous system injury;
KW cerebrovascular accident; CVA; Alzheimer's disease; multiple sclerosis;
KW chemotherapy-induced neuropathy; amyotrophic lateral sclerosis; ALS;
KW Parkinson's disease; ataxia; Huntington's disease;
KW Creutzfeldt-Jakob disease; muscular dystrophy; neurodegenerative disease.
X
OS Homo sapiens.
OS Synthetic.
X
PN WO200159103-A2.
X
PD 16-AUG-2001.
X
PF 09-FEB-2001; 2001WO-US04273.
X
PR 11-FEB-2000; 2000US-181797P.
PR 28-FEB-2000; 2000US-185516P.
PR 06-MAR-2000; 2000US-187128P.
X
PA (RIBO-) RIBOZYME PHARM INC.
PA (BLAT/) BLATT L.
PA (MCSW/) MCSWIGGEN J.
PA (CHOW/) CHOWRIRA B M.
X
PI Blatt L, McSwiggen J, Chowrira BM;
XX
DR WPI; 2001-607195/69.
XX
PT Nucleic acid molecules, e.g., enzymatic nucleic acids and antisense
PT constructs, which down regulate expression of a CD20 gene or neurite
PT growth inhibitor gene useful for treating, e.g., lymphoma, leukemia,
PT and central nervous system injury -
XX
PS Claim 88; Page 135; 200pp; English.
XX
CC The invention relates to a nucleic acid molecule which down regulates
CC expression of a CD20 gene and a nucleic acid molecule which down
CC regulates expression of a neurite growth inhibitor gene (NOGO).
CC The nucleic acids may be enzymatic nucleic acids (e.g. a ribozyme or a
CC DNAzyme) an Inozyme (an endolytic nucleic acid cleaving a an RNA molecule
CC possessing an NCH motif), a G-cleaver (cleaving RNA with a NYN
CC motif) pr an amberzyme (cleaving RNA with an NGN triplet), a zinzyme
CC (cleaving RNA with a YGY motif). The CD20-targetting nucleic acid is used
CC to cleave RNA of CD20 in the presence of a divalent cation that is
CC preferably Mg^2^+. Furthermore, it may be contacted with a cell to reduce
CC CD20 activity of the cell and treat a patient having a condition
CC associated with the level of CD20. The treatment may further comprise the
CC use of one or more therapies. In particular, the CD20 targetting
CC nucleic acid may be used to treat lymphoma, leukaemia, B-cell
CC lymphoma, low-grade or follicular non-Hodgkin's lymphoma (NHL), bulky
CC low-grade or follicular NHL, lymphocytic leukaemia, HIV (human
CC immunodeficiency virus) associated NHL, mantle-cell lymphoma (MCL),
CC immunocytoma (IMC), small B-cell lymphocytic lymphoma, immune
CC thrombocytopaenia, and inflammatory arthropathy. The NOGO-targetting
CC nucleic acid is used to cleave RNA of the NOGO gene in the presence of a
CC divalent cation that is preferably Mg^2^+. Furthermore, the nucleic acid
CC may be contacted with a cell to reduce NOGO activity of the cell and
CC treat a patient having a condition associated with the level of NOGO. The
CC treatment may further comprise the use of one or more therapies.
CC In particular, the NOGO-targetting nucleic acid may be used to treat
CC central nervous system (CNS) injury and cerebrovascular accident (CVA,
CC stroke), Alzheimer's disease, dementia, multiple sclerosis (MS),
CC chemotherapy-induced neuropathy, amyotrophic lateral sclerosis (ALS),
CC Parkinson's disease, ataxia, Huntington's disease, Creutzfeldt-Jakob
CC disease, muscular dystrophy, and/or other neurodegenerative disease
CC states which respond to the modulation of NOGO expression. The
CC present sequence is an amberzyme molecule of the invention.
XX
SQ Sequence 17 BP; 11 A; 1 C; 2 G; 3 U; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 78.6%; Pred. No. 5.1e+02;
Matches 11; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Qy 1204 ATTAAACAAACAAA 1217
|::||| |||||||
Db 3 AUUAAAGAAACAAA 16

RESULT 823
ABV80423/c
ID ABV80423 standard; DNA; 17 BP.
XX
AC ABV80423;
XX
DT 03-JAN-2003 (first entry)
XX
DE Human HTPL scanning oligonucleotide SEQ ID 1669.
XX
KW Human; gene therapy; tumour suppressor; HTPL; chromosome 10p12.1;
KW human testis expressed Patched like protein; testis; adrenal; liver;
KW male germ cell development; bone marrow; brain; kidney; lung; placenta;
KW prostate; skeletal muscle; colon; male infertility; cancer; ss.
XX
OS Homo sapiens.
XX
PN EP1229046-A2.

```
K
D   07-AUG-2002.
K
F   28-JAN-2002; 2002EP-0001167.
C
R   30-JAN-2001; 2001WO-US00663.
R   30-JAN-2001; 2001WO-US00664.
R   30-JAN-2001; 2001WO-US00665.
R   30-JAN-2001; 2001WO-US00667.
R   30-JAN-2001; 2001WO-US00668.
R   30-JAN-2001; 2001WO-US00669.
R   23-MAY-2001; 2001US-0864761.
R   09-OCT-2001; 2001US-0327898.
C
A   (AEOM-) AEOMICA INC.
C
I   Zhan J;
C
R   WPI; 2002-676582/73.
C
T   Novel isolated human testis expressed Patched like protein (HTPL),
T   useful for identifying agonist and antagonist and specific binding
T   partners, and for treating subjects having defects in HTPL -
K
S   Example 2; Page 282; 718pp; English.
K
C   The present invention relates to human testis expressed Patched like
C   protein (HTPL, see ABV78759 to ABV78762 and ABB98519 to ABB98520). HTPL
C   has two isoforms, with a few single base pair differences between the
C   two. One of the single base pair changes introduces a premature stop
C   codon in HTPL-S (S for short) compared to HTPL-L (L for long). HTPL
C   shares an overall structure organisation with the Patched protein. The
C   shared structural features strongly imply that HTPL plays a role similar
C   to that of Patched, and is a potential tumour suppressor. HTPL is
C   important in regulating male germ cell development, and the HTPL gene was
C   mapped to human chromosome 10p12.1. HTPL and its coding sequence are
C   useful for diagnosing a disorder caused by mutation in HTPL, and in
C   therapy and manufacture of a medicament for treatment or prevention of
C   such disorder associated with decreased expression or activity of human
C   HTPL. Such disorders include disorders of testis, or adrenal, adult and
C   foetal liver, bone marrow, brain, kidney, lung, placenta, prostate,
C   skeletal muscle or colon function. HTPL proteins and nucleic acids are
C   clinically useful diagnostic markers and potenial therapeutic agents for
C   male infertility and cancer. The present oligonucleotide was used in an
C   example from the invention.
K
Q   Sequence 17 BP; 2 A; 1 C; 2 G; 12 T; 0 other;

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
 Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y        678 ACAAATAGCAAAAT 691
             ||||||||||||||
b         17 AAAAATAGCAAAAT 4


ESULT 824
BV80429/c
D   ABV80429 standard; DNA; 17 BP.
X
C   ABV80429;
X
T   03-JAN-2003  (first entry)
X
E   Human HTPL scanning oligonucleotide SEQ ID 1675.
X
W   Human; gene therapy; tumour suppressor; HTPL; chromosome 10p12.1;
W   human testis expressed Patched like protein; testis; adrenal; liver;
W   male germ cell development; bone marrow; brain; kidney; lung; placenta;
W   prostate; skeletal muscle; colon; male infertility; cancer; ss.
X
S   Homo sapiens.
```

```
XX
PN   EP1229046-A2.
XX
PD   07-AUG-2002.
XX
PF   28-JAN-2002; 2002EP-0001167.
XX
PR   30-JAN-2001; 2001WO-US00663.
PR   30-JAN-2001; 2001WO-US00664.
PR   30-JAN-2001; 2001WO-US00665.
PR   30-JAN-2001; 2001WO-US00667.
PR   30-JAN-2001; 2001WO-US00668.
PR   30-JAN-2001; 2001WO-US00669.
PR   23-MAY-2001; 2001US-0864761.
PR   09-OCT-2001; 2001US-0327898.
XX
PA   (AEOM-) AEOMICA INC.
XX
PI   Zhan J;
XX
DR   WPI; 2002-676582/73.
XX
PT   Novel isolated human testis expressed Patched like protein (HTPL),
PT   useful for identifying agonist and antagonist and specific binding
PT   partners, and for treating subjects having defects in HTPL -
XX
PS   Example 2; Page 283; 718pp; English.
XX
CC   The present invention relates to human testis expressed Patched like
CC   protein (HTPL, see ABV78759 to ABV78762 and ABB98519 to ABB98520). HTPL
CC   has two isoforms, with a few single base pair differences between the
CC   two. One of the single base pair changes introduces a premature stop
CC   codon in HTPL-S (S for short) compared to HTPL-L (L for long). HTPL
CC   shares an overall structure organisation with the Patched protein. The
CC   shared structural features strongly imply that HTPL plays a role similar
CC   to that of Patched, and is a potential tumour suppressor. HTPL is
CC   important in regulating male germ cell development, and the HTPL gene was
CC   mapped to human chromosome 10p12.1. HTPL and its coding sequence are
CC   useful for diagnosing a disorder caused by mutation in HTPL, and in
CC   therapy and manufacture of a medicament for treatment or prevention of
CC   such disorder associated with decreased expression or activity of human
CC   HTPL. Such disorders include disorders of testis, or adrenal, adult and
CC   foetal liver, bone marrow, brain, kidney, lung, placenta, prostate,
CC   skeletal muscle or colon function. HTPL proteins and nucleic acids are
CC   clinically useful diagnostic markers and potenial therapeutic agents for
CC   male infertility and cancer. The present oligonucleotide was used in an
CC   example from the invention.
XX
SQ   Sequence 17 BP; 5 A; 2 C; 1 G; 9 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        675 TATACAAATAGCAA 688
              |||| |||||||||
Db         14 TATAAAAATAGCAA 1


RESULT 825
ABV80681/c
ID   ABV80681 standard; DNA; 17 BP.
XX
AC   ABV80681;
XX
DT   03-JAN-2003  (first entry)
XX
DE   Human HTPL scanning oligonucleotide SEQ ID 1927.
XX
KW   Human; gene therapy; tumour suppressor; HTPL; chromosome 10p12.1;
KW   human testis expressed Patched like protein; testis; adrenal; liver;
KW   male germ cell development; bone marrow; brain; kidney; lung; placenta;
KW   prostate; skeletal muscle; colon; male infertility; cancer; ss.
```

```
X
S   Homo sapiens.
X
N   EP1229046-A2.
X
D   07-AUG-2002.
X
F   28-JAN-2002; 2002EP-0001167.
X
R   30-JAN-2001; 2001WO-US00663.
R   30-JAN-2001; 2001WO-US00664.
R   30-JAN-2001; 2001WO-US00665.
R   30-JAN-2001; 2001WO-US00667.
R   30-JAN-2001; 2001WO-US00668.
R   30-JAN-2001; 2001WO-US00669.
R   23-MAY-2001; 2001US-0864761.
R   09-OCT-2001; 2001US-0327898.
X
A   (AEOM-) AEOMICA INC.
X
I   Zhan J;
X
R   WPI; 2002-676582/73.
X
T   Novel isolated human testis expressed Patched like protein (HTPL),
T   useful for identifying agonist and antagonist and specific binding
T   partners, and for treating subjects having defects in HTPL -
X
S   Example 2; Page 316; 718pp; English.
X
C   The present invention relates to human testis expressed Patched like
C   protein (HTPL, see ABV78759 to ABV78762 and ABB98519 to ABB98520). HTPL
C   has two isoforms, with a few single base pair differences between the
C   two. One of the single base pair changes introduces a premature stop
C   codon in HTPL-S (S for short) compared to HTPL-L (L for long). HTPL
C   shares an overall structure organisation with the Patched protein. The
C   shared structural features strongly imply that HTPL plays a role similar
C   to that of Patched, and is a potential tumour suppressor. HTPL is
C   important in regulating male germ cell development, and the HTPL gene was
C   mapped to human chromosome 10p12.1. HTPL and its coding sequence are
C   useful for diagnosing a disorder caused by mutation in HTPL, and in
C   therapy and manufacture of a medicament for treatment or prevention of
C   such disorder associated with decreased expression or activity of human
C   HTPL. Such disorders include disorders of testis, or adrenal, adult and
C   foetal liver, bone marrow, brain, kidney, lung, placenta, prostate,
C   skeletal muscle or colon function. HTPL proteins and nucleic acids are
C   clinically useful diagnostic markers and potenial therapeutic agents for
C   male infertility and cancer. The present oligonucleotide was used in an
C   example from the invention.
CX
SQ  Sequence 17 BP; 5 A; 2 C; 2 G; 8 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1459 TTATTATGTACAAA 1472
              |||| ||||||||||
Db         17 TTATGATGTACAAA 4


RESULT 826
ABV80682/c
ID  ABV80682 standard; DNA; 17 BP.
CX
AC  ABV80682;
CX
DT  03-JAN-2003  (first entry)
CX
DE  Human HTPL scanning oligonucleotide SEQ ID 1928.
CX
KW  Human; gene therapy; tumour suppressor; HTPL; chromosome 10p12.1;
KW  human testis expressed Patched like protein; testis; adrenal; liver;
KW  male germ cell development; bone marrow; brain; kidney; lung; placenta;
KW  prostate; skeletal muscle; colon; male infertility; cancer; ss.
XX
OS  Homo sapiens.
XX
PN  EP1229046-A2.
XX
PD  07-AUG-2002.
XX
PF  28-JAN-2002; 2002EP-0001167.
XX
PR  30-JAN-2001; 2001WO-US00663.
PR  30-JAN-2001; 2001WO-US00664.
PR  30-JAN-2001; 2001WO-US00665.
PR  30-JAN-2001; 2001WO-US00667.
PR  30-JAN-2001; 2001WO-US00668.
PR  30-JAN-2001; 2001WO-US00669.
PR  23-MAY-2001; 2001US-0864761.
PR  09-OCT-2001; 2001US-0327898.
XX
PA  (AEOM-) AEOMICA INC.
XX
PI  Zhan J;
XX
DR  WPI; 2002-676582/73.
XX
PT  Novel isolated human testis expressed Patched like protein (HTPL),
PT  useful for identifying agonist and antagonist and specific binding
PT  partners, and for treating subjects having defects in HTPL -
XX
PS  Example 2; Page 316; 718pp; English.
XX
CC  The present invention relates to human testis expressed Patched like
CC  protein (HTPL, see ABV78759 to ABV78762 and ABB98519 to ABB98520). HTPL
CC  has two isoforms, with a few single base pair differences between the
CC  two. One of the single base pair changes introduces a premature stop
CC  codon in HTPL-S (S for short) compared to HTPL-L (L for long). HTPL
CC  shares an overall structure organisation with the Patched protein. The
CC  shared structural features strongly imply that HTPL plays a role similar
CC  to that of Patched, and is a potential tumour suppressor. HTPL is
CC  important in regulating male germ cell development, and the HTPL gene was
CC  mapped to human chromosome 10p12.1. HTPL and its coding sequence are
CC  useful for diagnosing a disorder caused by mutation in HTPL, and in
CC  therapy and manufacture of a medicament for treatment or prevention of
CC  such disorder associated with decreased expression or activity of human
CC  HTPL. Such disorders include disorders of testis, or adrenal, adult and
CC  foetal liver, bone marrow, brain, kidney, lung, placenta, prostate,
CC  skeletal muscle or colon function. HTPL proteins and nucleic acids are
CC  clinically useful diagnostic markers and potenial therapeutic agents for
CC  male infertility and cancer. The present oligonucleotide was used in an
CC  example from the invention.
XX
SQ  Sequence 17 BP; 5 A; 2 C; 3 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1459 TTATTATGTACAAA 1472
              |||| ||||||||||
Db         16 TTATGATGTACAAA 3


RESULT 827
ABS74670
ID  ABS74670 standard; DNA; 17 BP.
XX
AC  ABS74670;
XX
DT  24-DEC-2002  (first entry)
XX
DE  Human PAPP-Ea associated 17-mer SEQ ID 196.
XX
```

W PAPP-E; human; pregnancy associated plasma protein E; abortive;
W contraceptive; gene therapy; vaccine; pregnancy; antenatal; diagnosis;
W dysgenetic pregnancy; primer; ss.
X
S Homo sapiens.
K
N US2002102252-A1.
K
D 01-AUG-2002.
K
F 06-APR-2001; 2001US-0827998.
K
R 26-MAY-2000; 2000US-207456P.
K
A (GUYY/) GU Y.
A (SHAN/) SHANNON M E.
K
I Gu Y, Shannon ME;
K
R WPI; 2002-697817/75.
K
T New isolated nucleic acid encoding an isoform of human pregnancy
T associated plasma protein E, for preventing or aborting pregnancy -
K
S Example 2; Page 101; 353pp; English.
K
C This invention describes a novel isolated nucleic acid that encodes
C one of three new isoforms of human pregnancy associated plasma protein E,
C hPAPP-E. The products of the invention have abortive and contraceptive
C activity and can be used for gene therapy or in a vaccine. The nucleic
C acid, polypeptide encoded by it, or antibody to the polypeptide can be
C used in pharmaceutical compositions or vaccines for preventing or
C aborting pregnancy. PAPP-E is used in the antenatal diagnosis of
C dysgenetic pregnancies. The nucleic acids are used as probes to assess
C the level of PAPP-E isoform mRNA in chorionic villus samples, and the
C antibodies can be used to assess the expression levels of PAPP-E isoform
C proteins in chorionic villus samples, to diagnose dysgenetic pregnancies
C antenatally. This sequence represents an oligomer used in scanning the
C human PAPP-E genes described in the disclosure of the invention.
X
Q Sequence 17 BP; 6 A; 1 C; 1 G; 9 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

y 1501 TGCATTTTAAATA 1514
||||||| ||||
b 4 TGCATTTAAAATA 17

ESULT 828
BS74671
D ABS74671 standard; DNA; 17 BP.
K
C ABS74671;
K
T 24-DEC-2002 (first entry)
K
E Human PAPP-Ea associated 17-mer SEQ ID 197.
K
W PAPP-E; human; pregnancy associated plasma protein E; abortive;
W contraceptive; gene therapy; vaccine; pregnancy; antenatal; diagnosis;
W dysgenetic pregnancy; primer; ss.
K
S Homo sapiens.
K
N US2002102252-A1.
K
D 01-AUG-2002.
K
F 06-APR-2001; 2001US-0827998.
K
R 26-MAY-2000; 2000US-207456P.
XX
PA (GUYY/) GU Y.
PA (SHAN/) SHANNON M E.
XX
PI Gu Y, Shannon ME;
XX
DR WPI; 2002-697817/75.
XX
PT New isolated nucleic acid encoding an isoform of human pregnancy
PT associated plasma protein E, for preventing or aborting pregnancy -
XX
PS Example 2; Page 101; 353pp; English.
XX
CC This invention describes a novel isolated nucleic acid that encodes
CC one of three new isoforms of human pregnancy associated plasma protein E,
CC hPAPP-E. The products of the invention have abortive and contraceptive
CC activity and can be used for gene therapy or in a vaccine. The nucleic
CC acid, polypeptide encoded by it, or antibody to the polypeptide can be
CC used in pharmaceutical compositions or vaccines for preventing or
CC aborting pregnancy. PAPP-E is used in the antenatal diagnosis of
CC dysgenetic pregnancies. The nucleic acids are used as probes to assess
CC the level of PAPP-E isoform mRNA in chorionic villus samples, and the
CC antibodies can be used to assess the expression levels of PAPP-E isoform
CC proteins in chorionic villus samples, to diagnose dysgenetic pregnancies
CC antenatally. This sequence represents an oligomer used in scanning the
CC human PAPP-E genes described in the disclosure of the invention.
XX
SQ Sequence 17 BP; 7 A; 1 C; 1 G; 8 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1501 TGCATTTTAAATA 1514
||||||| ||||
Db 3 TGCATTTAAAATA 16

RESULT 829
ABS74672
ID ABS74672 standard; DNA; 17 BP.
XX
AC ABS74672;
XX
DT 24-DEC-2002 (first entry)
XX
DE Human PAPP-Ea associated 17-mer SEQ ID 198.
XX
KW PAPP-E; human; pregnancy associated plasma protein E; abortive;
KW contraceptive; gene therapy; vaccine; pregnancy; antenatal; diagnosis;
KW dysgenetic pregnancy; primer; ss.
XX
OS Homo sapiens.
XX
PN US2002102252-A1.
XX
PD 01-AUG-2002.
XX
PF 06-APR-2001; 2001US-0827998.
XX
PR 26-MAY-2000; 2000US-207456P.
XX
PA (GUYY/) GU Y.
PA (SHAN/) SHANNON M E.
XX
PI Gu Y, Shannon ME;
XX
DR WPI; 2002-697817/75.
XX
PT New isolated nucleic acid encoding an isoform of human pregnancy
PT associated plasma protein E, for preventing or aborting pregnancy -
XX

```
PS   Example 2; Page 101; 353pp; English.
XX
CC   This invention describes a novel isolated nucleic acid that encodes
CC   one of three new isoforms of human pregnancy associated plasma protein E,
CC   hPAPP-E. The products of the invention have abortive and contraceptive
CC   activity and can be used for gene therapy or in a vaccine. The nucleic
CC   acid, polypeptide encoded by it, or antibody to the polypeptide can be
CC   used in pharmaceutical compositions or vaccines for preventing or
CC   aborting pregnancy. PAPP-E is used in the antenatal diagnosis of
CC   dysgenetic pregnancies. The nucleic acids are used as probes to assess
CC   the level of PAPP-E isoform mRNA in chorionic villus samples, and the
CC   antibodies can be used to assess the expression levels of PAPP-E isoform
CC   proteins in chorionic villus samples, to diagnose dysgenetic pregnancies
CC   antenatally. This sequence represents an oligomer used in scanning the
CC   human PAPP-E genes described in the disclosure of the invention.
XX
SQ   Sequence 17 BP; 7 A; 1 C; 2 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1501 TGCATTTTAAATA 1514
              ||||||| |||||
Db          2 TGCATTTTAAAATA 15


RESULT 830
ABS74673
ID   ABS74673 standard; DNA; 17 BP.
XX
AC   ABS74673;
XX
DT   24-DEC-2002  (first entry)
XX
DE   Human PAPP-Ea associated 17-mer SEQ ID 199.
XX
KW   PAPP-E; human; pregnancy associated plasma protein E; abortive;
KW   contraceptive; gene therapy; vaccine; pregnancy; antenatal; diagnosis;
KW   dysgenetic pregnancy; primer; ss.
XX
OS   Homo sapiens.
XX
PN   US2002102252-A1.
XX
PD   01-AUG-2002.
XX
PF   06-APR-2001; 2001US-0827998.
XX
PR   26-MAY-2000; 2000US-207456P.
XX
PA   (GUYY/) GU Y.
PA   (SHAN/) SHANNON M E.
XX
PI   Gu Y,  Shannon MB;
XX
DR   WPI; 2002-697817/75.
XX
PT   New isolated nucleic acid encoding an isoform of human pregnancy
PT   associated plasma protein E, for preventing or aborting pregnancy  -
XX
PS   Example 2; Page 101; 353pp; English.
XX
CC   This invention describes a novel isolated nucleic acid that encodes
CC   one of three new isoforms of human pregnancy associated plasma protein E,
CC   hPAPP-E. The products of the invention have abortive and contraceptive
CC   activity and can be used for gene therapy or in a vaccine. The nucleic
CC   acid, polypeptide encoded by it, or antibody to the polypeptide can be
CC   used in pharmaceutical compositions or vaccines for preventing or
CC   aborting pregnancy. PAPP-E is used in the antenatal diagnosis of
CC   dysgenetic pregnancies. The nucleic acids are used as probes to assess
CC   the level of PAPP-E isoform mRNA in chorionic villus samples, and the
CC   antibodies can be used to assess the expression levels of PAPP-E isoform
CC   proteins in chorionic villus samples, to diagnose dysgenetic pregnancies
CC   antenatally. This sequence represents an oligomer used in scanning the
CC   human PAPP-E genes described in the disclosure of the invention.
XX
SQ   Sequence 17 BP; 8 A; 1 C; 2 G; 6 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1501 TGCATTTTAAATA 1514
              ||||||| |||||
Db          1 TGCATTTTAAAATA 14


RESULT 831
ABL60107/c
ID   ABL60107 standard; DNA; 17 BP.
XX
AC   ABL60107;
XX
DT   16-AUG-2002  (first entry)
XX
DE   Example wild type DNA sequence probe #4 for biological array.
XX
KW   Biochip; array; probe; ss.
XX
OS   Unidentified.
XX
PN   WO200180155-A2.
XX
PD   25-OCT-2001.
XX
PF   18-APR-2001; 2001WO-US12750.
XX
PR   18-APR-2000; 2000US-198045P.
PR   22-NOV-2000; 2000US-252880P.
XX
PA   (COMB-) COMBIMATRIX CORP.
XX
PI   Anderson BP,  Quarles PA,  Ghazvini S;
XX
DR   WPI; 2002-017664/02.
XX
PT   Automated process for custom-designed biochip design, comprises
PT   obtaining desired target sequences from customer, creating sequence
PT   content motif for an array and applying the motif to a surface suitable
PT   for later detection  -
XX
PS   Example 10; Page 30; 47pp; English.
XX
CC   The invention relates to a novel process for a manufacturer to obtain
CC   customer orders for custom-designed biochips in an automated process. The
CC   invention also includes an automated system and process for providing a
CC   fully automated process for the design, manufacture and analysis of data
CC   for biological array devices. The sequence represents an example of a
CC   probe for a wild type sequence that may be used in a biological array of
CC   the invention.
XX
SQ   Sequence 17 BP; 8 A; 1 C; 2 G; 6 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        601 TATTTATTTGAATC 614
              ||||||||| ||||
Db         16 TATTTATTTCAATC 3


RESULT 832
ABK56190
ID   ABK56190 standard; RNA; 17 BP.
```

ABK56190;

02-JUL-2002 (first entry)

Human CLCA1 gene enzymatic nucleic acid #561.

Human; chloride channel calcium activated 1; CLCA1; ss; antiasthmatic; antiinflammatory; chronic obstructive pulmonary disease; COPD; asthma; chronic bronchitis; cystic fibrosis; obstructive bowel syndrome; oxygen therapy; bronchodilator; corticosteroid; vaccination; mucokinetic; acetylcysteine.

Homo sapiens.

WO200211674-A2.

14-FEB-2002.

09-AUG-2001; 2001WO-US24970.

09-AUG-2000; 2000US-224383P.

(RIBO-) RIBOZYME PHARM INC.
(SYNT) SYNTEX USA LLC.
(THOM/) THOMPSON J.

Thompson J, McSwiggen J, McKenzie T, Ayers D, Szymkowski DE; Grupe A;

WPI; 2002-217145/27.

Enzymatic polynucleotide that down regulates expression of chloride channel calcium activated gene, useful for treating Chronic obstructive pulmonary disease (COPD), chronic bronchitis and asthma -

Claim 4; Page 63; 152pp; English.

The invention relates to enzymatic nucleic acid molecules that down regulate expression of chloride channel calcium activated 1 (CLCA1) genes by cleaving RNA derived from the genes. The nucleic acid sequences are useful as pharmaceutical agents for treating conditions such as chronic obstructive pulmonary disease (COPD), chronic bronchitis, asthma, cystic fibrosis, obstructive bowel syndrome and any other diseases or conditions that are related to or will respond to the levels of CLCA1 in a cell or tissue. The sequences are useful for reducing CLCA1 activity in a cell, hence, are useful for treatment of a patient having a condition associated with the level of CLCA1, where the invention further comprises the use of one or more therapies under conditions suitable for the treatment, for example, oxygen therapy, bronchodilators, corticosteroids, antibacterials, vaccinations, acetylcysteine and mucokinetic agents. The nucleic acids of the invention are also used as diagnostic tools to examine genetic drift and mutations within diseased cells or to detect the presence of CLCA1 RNA in a cell. This sequence represents an enzymatic nucleic acid molecule of the invention.

Sequence 17 BP; 7 A; 1 C; 1 G; 8 U; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   42.9%;  Pred. No. 5.1e+02;
Matches    6;  Conservative    7;  Mismatches    1;  Indels    0;  Gaps    0;

       1134 TATAGTAAATTTAT 1147
            :|:||:| |:::|:
          3 UAUAGUACAUUUAU 16
```

SULT 833
K56834
ABK56834 standard; RNA; 17 BP.

ABK56834;

DT 02-JUL-2002 (first entry)
XX
DE Human CLCA1 gene enzymatic nucleic acid #1205.
XX
KW Human; chloride channel calcium activated 1; CLCA1; ss; antiasthmatic;
KW antiinflammatory; chronic obstructive pulmonary disease; COPD; asthma;
KW chronic bronchitis; cystic fibrosis; obstructive bowel syndrome;
KW oxygen therapy; bronchodilator; corticosteroid; vaccination; mucokinetic;
KW acetylcysteine.
XX
OS Homo sapiens.
XX
PN WO200211674-A2.
XX
PD 14-FEB-2002.
XX
PF 09-AUG-2001; 2001WO-US24970.
XX
PR 09-AUG-2000; 2000US-224383P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
PA (SYNT) SYNTEX USA LLC.
PA (THOM/) THOMPSON J.
XX
PI Thompson J, McSwiggen J, McKenzie T, Ayers D, Szymkowski DE;
PI Grupe A;
XX
DR WPI; 2002-217145/27.
XX
PT Enzymatic polynucleotide that down regulates expression of chloride
PT channel calcium activated gene, useful for treating Chronic obstructive
PT pulmonary disease (COPD), chronic bronchitis and asthma -
XX
PS Claim 4; Page 82; 152pp; English.
XX
CC The invention relates to enzymatic nucleic acid molecules that down
CC regulate expression of chloride channel calcium activated 1 (CLCA1) genes
CC by cleaving RNA derived from the genes. The nucleic acid sequences are
CC useful as pharmaceutical agents for treating conditions such as chronic
CC obstructive pulmonary disease (COPD), chronic bronchitis, asthma, cystic
CC fibrosis, obstructive bowel syndrome and any other diseases or conditions
CC that are related to or will respond to the levels of CLCA1 in a cell or
CC tissue. The sequences are useful for reducing CLCA1 activity in a cell,
CC hence, are useful for treatment of a patient having a condition
CC associated with the level of CLCA1, where the invention further comprises
CC the use of one or more therapies under conditions suitable for the
CC treatment, for example, oxygen therapy, bronchodilators, corticosteroids,
CC antibacterials, vaccinations, acetylcysteine and mucokinetic agents. The
CC nucleic acids of the invention are also used as diagnostic tools to
CC examine genetic drift and mutations within diseased cells or to detect
CC the presence of CLCA1 RNA in a cell. This sequence represents an
CC enzymatic nucleic acid molecule of the invention.
XX
SQ Sequence 17 BP; 6 A; 2 C; 1 G; 8 U; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   42.9%;  Pred. No. 5.1e+02;
  Matches    6;  Conservative    7;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1134 TATAGTAAATTTAT 1147
              :|:||:| |:::|:
Db          1 UAUAGUACAUUUAU 14
```

RESULT 834
AAD31941
ID AAD31941 standard; DNA; 17 BP.
XX
AC AAD31941;
XX
DT 18-JUN-2002 (first entry)
XX
DE Plasmodium falciparum beta-globin gene fragment.

```
C
W   Microbial virulence factor; genetic predisposition; Alzheimer's disease;
W   Parkinson's disease; schizophrenia; frontotemporal lobe dementia;
W   hereditary multi-infarct dementia; primary X-linked mental retardation;
W   dementia; myopathy; familial British dementia; psychiatric disorder;
W   transgenic animal; beta-globin gene; ds.
C
S   Plasmodium falciparum.
C
W   WO200214546-A1.
C
D   21-FEB-2002.
C
P   15-FEB-2001; 2001WO-IB00189.
K
R   16-AUG-2000; 2000WO-IB01127.
K
A   (FRIT/) FRITZSCHE M.
K
I   Fritzsche M;
K
R   WPI; 2002-241910/29.
K
T   Use of DNA sequence having fragment of nucleic acid encoding putative
T   microbial virulence factor useful for identification of disease e.g.
T   Alzheimer's disease, caused by mutations or for genetic predisposition
T   -
X
S   Example 1; Page 24; 52pp; English.
X
C   The present invention relates to the use of a DNA sequence comprising a
C   fragment of a nucleic acid encoding a putative microbial virulence factor
C   for the identification of a disease caused by mutations or for a genetic
C   predisposition. The invention also relates to a method for identification
C   of a disease which comprises detecting the presence of a mutation within
C   a nucleic acid sequence of the fragment of virulence factor in a tissue-
C   or blood sample of a subject, where the tissue sample is a foetal graft
C   for neurotransplantation and where the sequence is inserted in the 3'
C   UTR (untranslated region) of the gene and mutation is found in the
C   polyadenylation signal of G1. The method is useful for identification
C   of a disease caused by mutation or for their genetic predisposition
C   where the disease is human disease which is from Alzheimer's disease,
C   Parkinson's disease, schizophrenia, myopathy, other forms of dementias
C   (frontotemporal lobe dementia, autosomal dominant Parkinson Lewy-Body
C   dementia, hereditary multi-infarct dementia, familial British dementia,
C   primary X-linked mental retardation) and where the human disease
C   constitutes a predisposition or a genetic variation, the pathological
C   manifestation of which is triggered by medicaments or drugs which is
C   preferably cannabis, where the manifestation comprises any forms of
C   dementia, schizophrenia or related psychiatric disorders. The invention
C   also relates to transgenic animals (e.g. comprising a non-functional
C   endogenous cannabinoid receptor (CB1) gene) which are useful for the
C   identifying or screening of compounds that have an effect on the
C   activity, expression or regulation of the translated protein (e.g.
C   CB1 protein). The present sequence is Plasmodium falciparum beta-globin
C   gene fragment. This sequence is used in the exemplification of the
C   invention.
XX
SQ  Sequence 17 BP; 8 A; 1 C; 1 G; 7 T; 0 other;

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1604 ATATGAAACATTTA 1617
                ||| |||||||||
Db          1 ATAAGAAACATTTA 14


RESULT 835
ABK17630/c
ID   ABK17630 standard; RNA; 17 BP.
XX
AC   ABK17630;
XX
DT   09-APR-2002  (first entry)
XX
DE   Human ERG hammerhead ribozyme target sequence, Seq ID No 277.
XX
KW   Human; hammerhead ribozyme; cytostatic; antitumour; antidiabetic;
KW   ophthalmological; antiarthritic; antipsoriatic; virucide; osteopathic;
KW   vulnerary; cancer; lymphoma; Ewing's sarcoma; melanoma; psoriasis;
KW   tumour angiogenesis; diabetic retinopathy; macular degeneration;
KW   neovascular glaucoma; myopic degeneration; arthritis; verruca vulgaris;
KW   angiofibroma of tuberous sclerosis; port-wine stain; wound healing;
KW   Sturge Weber syndrome; Kippel-Trenaunay-Weber syndrome; leukaemia; ss;
KW   Osler-Weber-rendu syndrome, leukaemia; osteoporosis; DNAzyme; inozyme;
KW   amberzyme.
XX
OS   Homo sapiens.
XX
PN   WO200188124-A2.
XX
PD   22-NOV-2001.
XX
PF   16-MAY-2001; 2001WO-US15866.
XX
PR   16-MAY-2000; 2000US-0572021.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
PA   (GLAX ) GLAXO GROUP LTD.
XX
PI   Jarvis T,  Von Carlowitz I,  McSwiggen JA,  Mclaughlin F,  Randi AM;
XX
DR   WPI; 2002-082995/11.
XX
PT   Novel polynucleotide which down regulates expression of Ets-related
PT   gene, useful for treating cancer, diabetic retinopathy, macular
PT   degeneration, arthritis, psoriasis, verruca vulgaris and Sturge Weber
PT   syndrome  -
XX
PS   Claim 4; Page 63; 149pp; English.
XX
CC   The invention relates to a nucleic acid molecule (I) which down regulates
CC   expression of an Ets-related gene (ERG). (I) is useful for treating
CC   conditions selected from cancer, lymphoma, Ewing's sarcoma, melanoma,
CC   tumour angiogenesis, diabetic retinopathy, macular degeneration,
CC   neovascular glaucoma, myopic degeneration, arthritis, psoriasis, verruca
CC   vulgaris, angiofibroma of tuberous sclerosis, port-wine stains, Sturge
CC   Weber syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-rendu
CC   syndrome, leukaemia, osteoporosis and wound healing. (I) is useful for
CC   treating a patient having a condition associated with the level of ERG,
CC   by contacting cells of the patient with (I) under conditions suitable for
CC   the treatment. The method comprises the use of one or more therapies
CC   under conditions suitable for the treatment. Leukaemia or tumour
CC   angiogenesis is treated by administering (I) to the patient in
CC   conjunction with one or more of other therapies such as radiation or
CC   chemotherapy treatment. (I) is useful for reducing ERG activity in a
CC   cell, by contacting the cell with (I). (I) is useful for cleaving RNA of
CC   ERG gene, by contacting (I) with RNA, in the presence of a divalent
CC   cation such as Mg2+. (I) is useful for diagnosis of conditions and
CC   diseases related to the expression of ERG, and as diagnostic tool to
CC   examine genetic drift and mutations within diseased cells or to detect
CC   the presence of ERG RNA in a cell. (I) is useful for specifically
CC   targeting genes that share homology with ERG gene or ERG fusion genes.
CC   ABK17354-ABK22719 represent nucleic acids, including antisense and
CC   enzymatic nucleic acid molecules which regulate expression of ERG, and
CC   related PCR primers of the invention.
XX
SQ   Sequence 17 BP; 7 A; 3 C; 1 G; 6 U; 0 other;

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1505 TTTTTAAATACAAG 1518
```

```
          ||||||||||||| |
       17 TTTTTAAATACAGG 4

SULT 836
K19079/c
   ABK19079 standard; RNA; 17 BP.

   ABK19079;

   09-APR-2002  (first entry)

   Human ERG DNAzyme target sequence Seq ID No 1726.

   Human; hammerhead ribozyme; cytostatic; antitumour; antidiabetic;
   ophthalmological; antiarthritic; antipsoriatic; virucide; osteopathic;
   vulnerary; cancer; lymphoma; Ewing's sarcoma; melanoma; psoriasis;
   tumour angiogenesis; diabetic retinopathy; macular degeneration;
   neovascular glaucoma; myopic degeneration; arthritis; verruca vulgaris;
   angiofibroma of tuberous sclerosis; port-wine stain; wound healing;
   Sturge Weber syndrome; Kippel-Trenaunay-Weber syndrome; leukaemia; ss;
   Osler-Weber-rendu syndrome, leukaemia; osteoporosis; DNAzyme; inozyme;
   amberzyme.

   Homo sapiens.

   WO200188124-A2.

   22-NOV-2001.

   16-MAY-2001; 2001WO-US15866.

   16-MAY-2000; 2000US-0572021.

   (RIBO-) RIBOZYME PHARM INC.
   (GLAX ) GLAXO GROUP LTD.

   Jarvis T,  Von Carlowitz I,  McSwiggen JA,  Mclaughlin F,  Randi AM;

   WPI; 2002-082995/11.

   Novel polynucleotide which down regulates expression of Ets-related
   gene, useful for treating cancer, diabetic retinopathy, macular
   degeneration, arthritis, psoriasis, verruca vulgaris and Sturge Weber
   syndrome  -

   Claim 4; Page 108; 149pp; English.

   The invention relates to a nucleic acid molecule (I) which down regulates
   expression of an Ets-related gene (ERG). (I) is useful for treating
   conditions selected from cancer, lymphoma, Ewing's sarcoma, melanoma,
   tumour angiogenesis, diabetic retinopathy, macular degeneration,
   neovascular glaucoma, myopic degeneration, arthritis, psoriasis, verruca
   vulgaris, angiofibroma of tuberous sclerosis, port-wine stains, Sturge
   Weber syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-rendu
   syndrome, leukaemia, osteoporosis and wound healing. (I) is useful for
   treating a patient having a condition associated with the level of ERG,
   by contacting cells of the patient with (I) under conditions suitable for
   the treatment. The method comprises the use of one or more therapies
   under conditions suitable for the treatment. Leukaemia or tumour
   angiogenesis is treated by administering (I) to the patient in
   conjunction with one or more of other therapies such as radiation or
   chemotherapy treatment. (I) is useful for reducing ERG activity in a
   cell, by contacting the cell with (I). (I) is useful for cleaving RNA of
   ERG gene, by contacting (I) with RNA, in the presence of a divalent
   cation such as Mg2+. (I) is useful for diagnosis of conditions and
   diseases related to the expression of ERG, and as diagnostic tool to
   examine genetic drift and mutations within diseased cells or to detect
   the presence of ERG RNA in a cell. (I) is useful for specifically
   targeting genes that share homology with ERG gene or ERG fusion genes.
   ABK17354-ABK22719 represent nucleic acids, including antisense and
   enzymatic nucleic acid molecules which regulate expression of ERG, and
   related PCR primers of the invention.

XX
SQ  Sequence 17 BP; 9 A; 1 C; 1 G; 6 U; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1233 TTAAATTTTCATTT 1246
              | ||||||||||||
Db         14 TAAAATTTTCATTT 1

RESULT 837
ABT35721/c
ID  ABT35721 standard; DNA; 17 BP.
XX
AC  ABT35721;
XX
DT  12-JUN-2003  (first entry)
XX
DE  Tumour suppression related human fukutin oligo SEQ ID No 1358.
XX
KW  Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW  antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW  schizophrenia; protein chip; gene therapy; tumour suppression;
KW  human fukutin; ds.
XX
OS  Homo sapiens.
XX
PN  WO2003025175-A2.
XX
PD  27-MAR-2003.
XX
PF  17-SEP-2002; 2002WO-IB04208.
XX
PR  17-SEP-2001; 2001FR-0011978.
XX
PA  (MOLE-) MOLECULAR ENGINES LAB.
XX
PI  Telerman A,  Amson R,  Tuijnder M;
XX
DR  WPI; 2003-313353/30.
XX
PT  New isolated nucleic acid, useful for treating viral diseases
PT  associated with tumors and cell degeneration, also related
PT  polypeptides, antibodies and transfected cells  -
XX
PS  Disclosure; Page 191; 720pp; French.
XX
CC  The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC  given in the specification, a sequence containing at least 15
CC  consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC  optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC  sequence that hybridizes to them under highly stringent conditions, or
CC  the complement of any of them, or the corresponding RNA. The novel
CC  isolated nucleic acids of the invention are useful as probes and primers
CC  for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC  e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC  and for production of recombinant polypeptides. Any of the nucleic acids,
CC  polypeptides, vectors containing the nucleic acids, cells containing the
CC  vector or antibodies directed against the polypeptides are useful for
CC  preparation of pharmaceuticals for prevention and/or treatment of viral
CC  diseases that are characterised by development of tumours or cell
CC  degeneration, specifically cancer but also Alzheimer's disease and
CC  schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC  patient samples is useful for diagnosis and/or prognosis of these
CC  diseases. The polypeptides can also be used to generate antibodies, and
CC  both the polypeptide and antibodies are useful as components of protein
CC  chips. The nucleic acid sequences of the invention can be used in gene
CC  therapy. This polynucleotide sequence represents a tumour suppression
CC  related human fukutin oligonucleotide of the invention.
XX
SQ  Sequence 17 BP; 10 A; 3 C; 1 G; 3 T; 0 other;
```

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy       1146 ATTTTATTTTAGAT 1159
              ||||||||||| |||
Db         15 ATTTTATTTTTGAT 2
```

RESULT 838
ABT36211
ID ABT36211 standard; DNA; 17 BP.
XX
AC ABT36211;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 1848.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 249; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 5 A; 2 C; 6 G; 4 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy        953 TCACAGTGATGTTG 966
              ||||||||||||| |
Db          3 TCACAGTGATGTAG 16
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RESULT 839
ABT36218/c
ID ABT36218 standard; DNA; 17 BP.
XX
AC ABT36218;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 1855.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 249; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 3 A; 4 C; 4 G; 6 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 17;
Best Local Similarity 92.9%; Pred. No. 5.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy        413 CCAAGAATCAGTGA 426
              |||||| |||||||
Db         16 CCAAGAGTCAGTGA 3
```

RESULT 840
ABT36376
ID ABT36376 standard; DNA; 17 BP.
XX
AC ABT36376;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 2013.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 268; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 4 A; 1 C; 1 G; 11 T; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1142 ATTTATTTTATTTT 1155
              || ||||||||||||
Db          2 ATCTATTTTATTTT 15
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RESULT 841
ABT37154
ID ABT37154 standard; DNA; 17 BP.
XX
AC ABT37154;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 2791.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 359; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC and for production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention.
XX
SQ Sequence 17 BP; 2 A; 3 C; 1 G; 11 T; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        908 TCTCCTTTATTTCT 921
              ||| ||||||||||
Db          3 TCTTCTTTATTTCT 16
```

```
RESULT 842
ABT37510
ID   ABT37510 standard; DNA; 17 BP.
XX
AC   ABT37510;
XX
DT   12-JUN-2003  (first entry)
XX
DE   Tumour suppression related human fukutin oligo SEQ ID No 3147.
XX
KW   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW   antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW   schizophrenia; protein chip; gene therapy; tumour suppression;
KW   human fukutin; ds.
XX
OS   Homo sapiens.
XX
PN   WO2003025175-A2.
XX
PD   27-MAR-2003.
XX
PF   17-SEP-2002; 2002WO-IB04208.
XX
PR   17-SEP-2001; 2001FR-0011978.
XX
PA   (MOLE-) MOLECULAR ENGINES LAB.
XX
PI   Telerman A,  Amson R,  Tuijnder M;
XX
DR   WPI; 2003-313353/30.
XX
PT   New isolated nucleic acid, useful for treating viral diseases
PT   associated with tumors and cell degeneration, also related
PT   polypeptides, antibodies and transfected cells  -
XX
PS   Disclosure; Page 401; 720pp; French.
XX
CC   The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC   given in the specification, a sequence containing at least 15
CC   consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC   optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC   sequence that hybridizes to them under highly stringent conditions, or
CC   the complement of any of them, or the corresponding RNA. The novel
CC   isolated nucleic acids of the invention are useful as probes and primers
CC   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC   and for production of recombinant polypeptides. Any of the nucleic acids,
CC   polypeptides, vectors containing the nucleic acids, cells containing the
CC   vector or antibodies directed against the polypeptides are useful for
CC   preparation of pharmaceuticals for prevention and/or treatment of viral
CC   diseases that are characterised by development of tumours or cell
CC   degeneration, specifically cancer but also Alzheimer's disease and
CC   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC   patient samples is useful for diagnosis and/or prognosis of these
CC   diseases. The polypeptides can also be used to generate antibodies, and
CC   both the polypeptide and antibodies are useful as components of protein
CC   chips. The nucleic acid sequences of the invention can be used in gene
CC   therapy. This polynucleotide sequence represents a tumour suppression
CC   related human fukutin oligonucleotide of the invention.
XX
SQ   Sequence 17 BP; 4 A; 3 C; 2 G; 8 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        910 TCCTTTATTTCTAA 923
              ||||||||||||| |
Db          3 TCCTTTATTTCTGA 16
```

```
RESULT 843
ABT37886
ID   ABT37886 standard; DNA; 17 BP.
XX
AC   ABT37886;
XX
DT   12-JUN-2003  (first entry)
XX
DE   Tumour suppression related human fukutin oligo SEQ ID No 3523.
XX
KW   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW   antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW   schizophrenia; protein chip; gene therapy; tumour suppression;
KW   human fukutin; ds.
XX
OS   Homo sapiens.
XX
PN   WO2003025175-A2.
XX
PD   27-MAR-2003.
XX
PF   17-SEP-2002; 2002WO-IB04208.
XX
PR   17-SEP-2001; 2001FR-0011978.
XX
PA   (MOLE-) MOLECULAR ENGINES LAB.
XX
PI   Telerman A,  Amson R,  Tuijnder M;
XX
DR   WPI; 2003-313353/30.
XX
PT   New isolated nucleic acid, useful for treating viral diseases
PT   associated with tumors and cell degeneration, also related
PT   polypeptides, antibodies and transfected cells  -
XX
PS   Disclosure; Page 445; 720pp; French.
XX
CC   The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC   given in the specification, a sequence containing at least 15
CC   consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC   optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC   sequence that hybridizes to them under highly stringent conditions, or
CC   the complement of any of them, or the corresponding RNA. The novel
CC   isolated nucleic acids of the invention are useful as probes and primers
CC   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC   and for production of recombinant polypeptides. Any of the nucleic acids,
CC   polypeptides, vectors containing the nucleic acids, cells containing the
CC   vector or antibodies directed against the polypeptides are useful for
CC   preparation of pharmaceuticals for prevention and/or treatment of viral
CC   diseases that are characterised by development of tumours or cell
CC   degeneration, specifically cancer but also Alzheimer's disease and
CC   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC   patient samples is useful for diagnosis and/or prognosis of these
CC   diseases. The polypeptides can also be used to generate antibodies, and
CC   both the polypeptide and antibodies are useful as components of protein
CC   chips. The nucleic acid sequences of the invention can be used in gene
CC   therapy. This polynucleotide sequence represents a tumour suppression
CC   related human fukutin oligonucleotide of the invention.
XX
SQ   Sequence 17 BP; 6 A; 2 C; 4 G; 5 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        839 TCTGTTAAATCTGG 852
              |||||||||||  ||
Db          3 TCTGTTAAATCAGG 16


RESULT 844
ABT38326/c
```

```
D   ABT38326 standard; DNA; 17 BP.
X
C   ABT38326;
X
T   12-JUN-2003  (first entry)
X
B   Tumour suppression related human fukutin oligo SEQ ID No 3963.
K
W   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
W   antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
W   schizophrenia; protein chip; gene therapy; tumour suppression;
W   human fukutin; ds.
C
S   Homo sapiens.
C
P   WO2003025175-A2.
C
P   27-MAR-2003.

P   17-SEP-2002; 2002WO-IB04208.

P   17-SEP-2001; 2001FR-0011978.

A   (MOLE-) MOLECULAR ENGINES LAB.

I   Telerman A,  Amson R,  Tuijnder M;

D   WPI; 2003-313353/30.

T   New isolated nucleic acid, useful for treating viral diseases
T   associated with tumors and cell degeneration, also related
T   polypeptides, antibodies and transfected cells  -

S   Disclosure; Page 497; 720pp; French.

C   The invention relates to a novel isolated 17 mer nucleic acid sequence,
C   given in the specification, a sequence containing at least 15
C   consecutive nucleotides from the 17 mer sequence, a sequence with, after
C   optimal alignment, at least 80 % identity to the 17 mer sequence, a
C   sequence that hybridizes to them under highly stringent conditions, or
C   the complement of any of them, or the corresponding RNA. The novel
C   isolated nucleic acids of the invention are useful as probes and primers
C   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
C   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
C   and for production of recombinant polypeptides. Any of the nucleic acids,
C   polypeptides, vectors containing the nucleic acids, cells containing the
C   vector or antibodies directed against the polypeptides are useful for
C   preparation of pharmaceuticals for prevention and/or treatment of viral
C   diseases that are characterised by development of tumours or cell
C   degeneration, specifically cancer but also Alzheimer's disease and
C   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
C   patient samples is useful for diagnosis and/or prognosis of these
C   diseases. The polypeptides can also be used to generate antibodies, and
C   both the polypeptide and antibodies are useful as components of protein
C   chips. The nucleic acid sequences of the invention can be used in gene
C   therapy. This polynucleotide sequence represents a tumour suppression
C   related human fukutin oligonucleotide of the invention.

S   Sequence 17 BP; 8 A; 1 C; 1 G; 7 T; 0 other;

Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

      1146 ATTTTATTTTAGAT 1159
           ||||||||| ||||
        15 ATTTTATTTAAGAT 2


SULT 845
T39589
   ABT39589 standard; DNA; 17 BP.
```

```
AC   ABT39589;
XX
DT   12-JUN-2003  (first entry)
XX
DE   Tumour suppression related human fukutin oligo SEQ ID No 5226.
XX
KW   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW   antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW   schizophrenia; protein chip; gene therapy; tumour suppression;
KW   human fukutin; ds.
XX
OS   Homo sapiens.
XX
PN   WO2003025175-A2.
XX
PD   27-MAR-2003.
XX
PF   17-SEP-2002; 2002WO-IB04208.
XX
PR   17-SEP-2001; 2001FR-0011978.
XX
PA   (MOLE-) MOLECULAR ENGINES LAB.
XX
PI   Telerman A,  Amson R,  Tuijnder M;
XX
DR   WPI; 2003-313353/30.
XX
PT   New isolated nucleic acid, useful for treating viral diseases
PT   associated with tumors and cell degeneration, also related
PT   polypeptides, antibodies and transfected cells  -
XX
PS   Disclosure; Page 644; 720pp; French.
XX
CC   The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC   given in the specification, a sequence containing at least 15
CC   consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC   optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC   sequence that hybridizes to them under highly stringent conditions, or
CC   the complement of any of them, or the corresponding RNA. The novel
CC   isolated nucleic acids of the invention are useful as probes and primers
CC   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC   and for production of recombinant polypeptides. Any of the nucleic acids,
CC   polypeptides, vectors containing the nucleic acids, cells containing the
CC   vector or antibodies directed against the polypeptides are useful for
CC   preparation of pharmaceuticals for prevention and/or treatment of viral
CC   diseases that are characterised by development of tumours or cell
CC   degeneration, specifically cancer but also Alzheimer's disease and
CC   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC   patient samples is useful for diagnosis and/or prognosis of these
CC   diseases. The polypeptides can also be used to generate antibodies, and
CC   both the polypeptide and antibodies are useful as components of protein
CC   chips. The nucleic acid sequences of the invention can be used in gene
CC   therapy. This polynucleotide sequence represents a tumour suppression
CC   related human fukutin oligonucleotide of the invention.
XX
SQ   Sequence 17 BP; 4 A; 2 C; 4 G; 7 T; 0 other;

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   92.9%;  Pred. No. 5.1e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        809 TCAAATTTAGCTGG 822
              ||||||| |||||
Db          3 TCAAATTTGCTGG 16


RESULT 846
ACA06849
ID   ACA06849 standard; RNA; 17 BP.
XX
AC   ACA06849;
XX
```

```
T   03-JUN-2003  (first entry)
X
E   NFKB sub-unit modulating inozyme substrate #668.
X
W   Enzymatic nucleic acid; nuclear factor kappa B; NFKB; inozyme; zinzyme;
W   G-cleaver; amberzyme; cancer; REL-A activity; breast cancer; human;
W   lung cancer; prostate cancer; colorectal cancer; brain cancer;
W   oesophageal cancer; stomach cancer; bladder cancer; pancreatic cancer;
W   cervical cancer; head and neck cancer; ovarian cancer; melanoma;
W   lymphoma; glioma; multidrug resistant cancer; REL-A-specific inhibitor;
W   chemotherapy; paclitaxel; docetaxel; cisplatin; methotrexate;
W   cyclophosphamide; doxorubin; fluorouracil carboplatin; edatrexate;
W   gemcitabine; radiation therapy; inflammatory disease; asthma; diabetes;
W   rheumatoid arthritis; restenosis; Crohn's disease; obesity; ischaemia;
W   gene therapy; autoimmune disease; lupus; multiple sclerosis; sepsis;
W   transplant/graft rejection; reperfusion injury; glomerulonephritis;
W   allergic airway inflammation; inflammatory bowel disease; infection;
W   ss.
X
S   Homo sapiens.
X
N   US2002177568-A1.
X
D   28-NOV-2002.
X
F   23-MAY-2001; 2001US-0864785.
X
R   15-AUG-1994;   94US-0291932.
R   07-DEC-1992;   92US-0987132.
R   18-MAY-1994;   94US-0245466.
R   23-DEC-1996;   96US-0777916.
X
A   (STIN/) STINCHCOMB D T.
A   (MCSW/) MCSWIGGEN J.
A   (DRAP/) DRAPER K G.
X
I   Stinchcomb DT,  Mcswiggen J,  Draper KG;
X
R   WPI; 2003-340953/32.
X
T   Novel enzymatic nucleic acid molecules which down regulates expression
T   of a sequence encoding a subunit of nuclear factor kappa B useful for
T   treating cancer, inflammatory disorders and autoimmune diseases  -
X
S   Claim 3; Page 36; 72pp; English.
X
C   The invention describes an enzymatic nucleic acid molecule (I) which down
C   regulates expression of a sequence encoding a subunit of nuclear factor
C   kappa B (NFKB), where (I) is an inozyme, zinzyme, G-cleaver or amberzyme
C   configuration. The enzymatic nucleic acid molecule is adapted to treat
C   cancer and is useful for down-regulating REL-A activity in a cell, for
C   treating a patient having a condition associated with the level of REL-A.
C   (I) is useful for cleaving RNA comprising a sequence of REL-A gene, in
C   the presence of a divalent cation, especially Mg^2^+. The enzymatic and
C   antisense nucleic acid molecules are useful for treating breast, lung,
C   prostate, colorectal, brain, oesophageal, stomach, bladder, pancreatic,
C   cervical, head and neck, ovarian cancer, melanoma, lymphoma, glioma or
C   multidrug resistant cancer. The method involves use of other drug
CC  therapies such as monoclonal antibodies, REL-A-specific inhibitors or
CC  chemotherapy including paclitaxel, docetaxel, cisplatin, methotrexate,
CC  cyclophosphamide, doxorubin, fluorouracil carboplatin, edatrexate,
CC  gemcitabine or radiation therapy. The enzymatic and antisense nucleic
CC  acid molecules are also useful for treating inflammatory disease such as
CC  rheumatoid arthritis, restenosis, asthma, Crohn's disease, diabetes,
CC  obesity, autoimmune disease, lupus, multiple sclerosis, transplant/graft
CC  rejection, gene therapy applications, ischaemia/reperfusion injury
CC  (central nervous system (CNS) and myocardial), glomerulonephritis,
CC  sepsis, allergic airway inflammation, inflammatory bowel disease or
CC  infection. This sequence represents the substrate of a novel
CC  enzymatic nucleic acid molecule.
XX
SQ  Sequence 17 BP; 5 A; 4 C; 7 G; 1 U; 0 other;
```

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   85.7%;  Pred. No. 5.1e+02;
  Matches   12;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        870 CCAGGATCCACAAG 883
              ||||||:||| |||
Db          1 CCAGGAUCCAGAAG 14
```

```
RESULT 847
ACA08322
ID   ACA08322 standard; DNA; 17 BP.
XX
AC   ACA08322;
XX
DT   03-JUN-2003  (first entry)
XX
DE   Necrosis factor kappa B (NFKB) sub-unit modulating DNAzyme #91.
XX
KW   Enzymatic nucleic acid; nuclear factor kappa B; NFKB; inozyme; zinzyme;
KW   G-cleaver; amberzyme; cancer; REL-A activity; breast cancer;
KW   lung cancer; prostate cancer; colorectal cancer; brain cancer;
KW   oesophageal cancer; stomach cancer; bladder cancer; pancreatic cancer;
KW   cervical cancer; head and neck cancer; ovarian cancer; melanoma;
KW   lymphoma; glioma; multidrug resistant cancer; REL-A-specific inhibitor;
KW   chemotherapy; paclitaxel; docetaxel; cisplatin; methotrexate;
KW   cyclophosphamide; doxorubin; fluorouracil carboplatin; edatrexate;
KW   gemcitabine; radiation therapy; inflammatory disease; asthma; diabetes;
KW   rheumatoid arthritis; restenosis; Crohn's disease; obesity; ischaemia;
KW   gene therapy; autoimmune disease; lupus; multiple sclerosis; sepsis;
KW   transplant/graft rejection; reperfusion injury; glomerulonephritis;
KW   allergic airway inflammation; inflammatory bowel disease; infection;
KW   ss.
XX
OS   Synthetic.
XX
PN   US2002177568-A1.
XX
PD   28-NOV-2002.
XX
PF   23-MAY-2001; 2001US-0864785.
XX
PR   15-AUG-1994;   94US-0291932.
PR   07-DEC-1992;   92US-0987132.
PR   18-MAY-1994;   94US-0245466.
PR   23-DEC-1996;   96US-0777916.
XX
PA   (STIN/) STINCHCOMB D T.
PA   (MCSW/) MCSWIGGEN J.
PA   (DRAP/) DRAPER K G.
XX
PI   Stinchcomb DT,  Mcswiggen J,  Draper KG;
XX
DR   WPI; 2003-340953/32.
XX
PT   Novel enzymatic nucleic acid molecules which down regulates expression
PT   of a sequence encoding a subunit of nuclear factor kappa B useful for
PT   treating cancer, inflammatory disorders and autoimmune diseases  -
XX
PS   Claim 3; Page 48; 72pp; English.
XX
CC   The invention describes an enzymatic nucleic acid molecule (I) which down
CC   regulates expression of a sequence encoding a subunit of nuclear factor
CC   kappa B (NFKB), where (I) is an inozyme, zinzyme, G-cleaver or amberzyme
CC   configuration. The enzymatic nucleic acid molecule is adapted to treat
CC   cancer and is useful for down-regulating REL-A activity in a cell, for
CC   treating a patient having a condition associated with the level of REL-A.
CC   (I) is useful for cleaving RNA comprising a sequence of REL-A gene, in
CC   the presence of a divalent cation, especially Mg^2^+. The enzymatic and
CC   antisense nucleic acid molecules are useful for treating breast, lung,
CC   prostate, colorectal, brain, oesophageal, stomach, bladder, pancreatic,
CC   cervical, head and neck, ovarian cancer, melanoma, lymphoma, glioma or
CC   multidrug resistant cancer. The method involves use of other drug
```

therapies such as monoclonal antibodies, REL-A-specific inhibitors or chemotherapy including paclitaxel, docetaxel, cisplatin, methotrexate, cyclophosphamide, doxorubin, fluorouracil carboplatin, edatrexate, gemcitabine or radiation therapy. The enzymatic and antisense nucleic acid molecules are also useful for treating inflammatory disease such as rheumatoid arthritis, restenosis, asthma, Crohn's disease, diabetes, obesity, autoimmune disease, lupus, multiple sclerosis, transplant/graft rejection, gene therapy applications, ischaemia/reperfusion injury (central nervous system (CNS) and myocardial), glomerulonephritis, sepsis, allergic airway inflammation, inflammatory bowel disease or infection. This sequence represents an enzymatic nucleic acid used to modulate the function of a necrosis factor kappa B sub-unit.

Sequence 17 BP; 5 A; 5 C; 4 G; 3 U; 0 other;

```
Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
Best Local Similarity   85.7%;  Pred. No. 5.1e+02;
Matches   12;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        870 CCAGGATCCACAAG 883
              ||||||:|||  |||
Db          4 CCAGGAUCCAGAAG 17
```

SULT 848
Z60207
ABZ60207 standard; RNA; 17 BP.

ABZ60207;

21-MAR-2003 (first entry)

Human K-Ras DNAzyme substrate #319.

Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras; enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV; anti-rheumatic; cancer; AIDS; ss.

Homo sapiens.

WO200297114-A2.

05-DEC-2002.

29-MAY-2002; 2002WO-US16840.

29-MAY-2001; 2001US-294140P.
06-JUN-2001; 2001US-296249P.
10-SEP-2001; 2001US-318471P.

(RIBO-) RIBOZYME PHARM INC.

Mcswiggen J;

WPI; 2003-140484/13.

Novel short interfering RNA and enzymatic nucleic acid useful for treating cancer, modulates the expression of a nucleic acid encoding HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -

Claim 58; Page 91; 185pp; English.

The invention relates to a novel short interfering RNA (siRNA) nucleic acid molecule or an enzymatic nucleic acid molecule, that modulates expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras, human immunodeficiency virus (HIV) or a component of HIV. The nucleic acid molecule of the invention has cytostatic, anti-HIV, and anti-rheumatic activity. The nucleic acid molecules are useful for reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic acids are also useful for treating breast, ovarian, colorectal, lung, prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS. The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531, ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target

CC sequences for the human ribozymes of the invention.
XX
SQ Sequence 17 BP; 8 A; 3 C; 1 G; 5 U; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   57.1%;  Pred. No. 5.1e+02;
  Matches    8;  Conservative    5;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1175 ATTAGATAAATTTC 1188
              |::|||:|||:: |
Db          4 AUUAGAUAAAUUAC 17
```

RESULT 849
ABZ61180
ID ABZ61180 standard; RNA; 17 BP.
XX
AC ABZ61180;
XX
DT 21-MAR-2003 (first entry)
XX
DE Human K-Ras DNAzyme substrate #1292.
XX
KW Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW anti-rheumatic; cancer; AIDS; ss.
XX
OS Homo sapiens.
XX
PN WO200297114-A2.
XX
PD 05-DEC-2002.
XX
PF 29-MAY-2002; 2002WO-US16840.
XX
PR 29-MAY-2001; 2001US-294140P.
PR 06-JUN-2001; 2001US-296249P.
PR 10-SEP-2001; 2001US-318471P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J;
XX
DR WPI; 2003-140484/13.
XX
PT Novel short interfering RNA and enzymatic nucleic acid useful for
PT treating cancer, modulates the expression of a nucleic acid encoding
PT HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -
XX
PS Claim 58; Page 109; 185pp; English.
XX
CC The invention relates to a novel short interfering RNA (siRNA) nucleic
CC acid molecule or an enzymatic nucleic acid molecule, that modulates
CC expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC acid molecule of the invention has cytostatic, anti-HIV, and
CC anti-rheumatic activity. The nucleic acid molecules are useful for
CC reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC acids are also useful for treating breast, ovarian, colorectal, lung,
CC prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC sequences for the human ribozymes of the invention.
XX
SQ Sequence 17 BP; 7 A; 0 C; 3 G; 7 U; 0 other;

```
  Query Match             1.0%;  Score 12.4;  DB 1;  Length 17;
  Best Local Similarity   50.0%;  Pred. No. 5.1e+02;
  Matches    7;  Conservative    6;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1111 TGATTGAATAGTTA 1124
              : |::|||:||::|
Db          2 UAAUUGAAUAGUUA 15
```

ESULT 850
AA66457/c
D AAA66457 standard; DNA; 25 BP.
X
C AAA66457;
X
T 09-OCT-2000 (first entry)
X
E Dog genomic marker oligonucleotide sequence SEQ ID NO:319.
X
W Dog; genome; genomic marker; radiation hybrid map; identification;
W chromosome location; gene marker; polymorphic microsatellite marker;
W phenotype; behaviour; pedigree; ss.
X
S Canis familiaris.
X
N WO200029615-A2.
X
D 25-MAY-2000.
X
F 15-NOV-1999; 99WO-IB01907.
X
R 13-NOV-1998; 98US-0108193.
X
A (CNRS) CNRS CENT NAT RECH SCI.
X
I Galibert F, Andre C;
X
R WPI; 2000-387821/33.
X
T New radiation hybrid map of the dog, Canine familiaris, genome, useful
T for e.g. identifying genes implicated in phenotypic and behavioral
T traits or in genetic diseases and for studying dog pedigrees -
X
S Claim 1; Page 66; 87pp; English.
X
C The present invention describes a radiation hybrid map of the dog
C (Canine familiaris) genome comprising the genome location of a marker
C selected from AAA66139 to AAA66942. The radiation hybrid map is useful
C for identifying and localising dog genes, since it covers approximately
C 80 % of the dog genome and provides a dense map integrating different
C types (i.e. Type I and Type II) of markers. The map and the dog genome
C markers (or complementary sequences) are especially useful to identify
C genes responsible for phenotypic and behavioural traits in dogs, to
C identify morbid genes, to analyse diseases and identify implicated genes
C in such diseases and their alleles, and to study dog pedigrees. They
C may also be useful for isolating corresponding human gene sequences
C e.g. genes involved in genetic diseases.
X
SQ Sequence 25 BP; 12 A; 5 C; 3 G; 5 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 25;
Best Local Similarity 72.7%; Pred. No. 6.4e+02;
Matches 16; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 1008 TAAATTATTTTCAAGTGTAACT 1029
|| ||| |||| |||| | | |
Db 25 TAGATTTTTTTGAAGTCTCATT 4

RESULT 851
AAL55125/c
ID AAL55125 standard; DNA; 30 BP.
XX
AC AAL55125;
XX
DT 16-APR-2003 (first entry)
XX
DE Nucleic acid synthesising method related PCR primer, SEQ ID No 6.
XX
KW Synthesising; target base sequence; annealing; genetic disease; SNP;
KW single nucleotide polymorphism; cancer; PCR; primer; ss.
XX
OS Unidentified.
XX
PN WO200290538-A1.
XX
PD 14-NOV-2002.
XX
PF 08-MAY-2002; 2002WO-JP04479.
XX
PR 08-MAY-2001; 2001JP-0137060.
PR 18-JUN-2001; 2001JP-0184131.
XX
PA (EIKE) EIKEN KAGAKU KK.
XX
PI Nagamine K;
XX
DR WPI; 2003-120547/11.
XX
PT Synthesizing target base sequence-containing nucleic acids constituting
PT complementary base sequences against template by the LAMP method,
PT applicable in identifying genetic diseases, cancerization and
PT microorganisms -
XX
PS Example 1; Page 62; 107pp; Japanese.
XX
CC The invention relates to a novel method for synthesising a target base
CC sequence-containing nucleic acids. The method comprises the formation of
CC single-stranded nucleic acids; synthesis of complementary strand by
CC annealing; and producing single-stranded nucleic acid from a target base
CC sequence by the synthesis of a complementary strand by annealing of a
CC complementary base sequence. The method is useful for synthesising a
CC target base sequence-containing nucleic acids, which is applicable in
CC detecting SNP (single nucleotide polymorphism) in genes, identifying
CC genetic diseases, cancer and microorganisms. Such a method can be
CC easily, rapidly and freely carried out without being influenced by
CC contamination or complicated temperature control, but with improved
CC reaction specificity, high accuracy and efficiency, operable at low cost.
CC This polynucleotide sequence represents a PCR primer used in the
CC synthesising method of the invention.
XX
SQ Sequence 30 BP; 13 A; 3 C; 5 G; 9 T; 0 other;

Query Match 1.0%; Score 12.4; DB 1; Length 30;
Best Local Similarity 72.7%; Pred. No. 6.7e+02;
Matches 16; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 1068 CAAATATTTGTGCAAGAATTTG 1089
||||| ||| ||| |||||
Db 25 CAAATTCTTGCACAAATATTTG 4

RESULT 852
AAA22700/c
ID AAA22700 standard; RNA; 17 BP.
XX
AC AAA22700;
XX
DT 19-JUN-2000 (first entry)
XX
DE Integrin subunit beta 3 substrate sequence SEQ ID NO:5926.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.

WO9950403-A2.

07-OCT-1999.

24-MAR-1999; 99WO-US06507.

27-MAR-1998; 98US-0079678.

(RIBO-) RIBOZYME PHARM INC.

Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;

WPI; 1999-591315/50.

Novel ribozymes for modulating the synthesis, expression and/or stability of an mRNA encoding an angiogenic factors -

Claim 54; Page 237; 305pp; English.

The present invention describes enzymatic nucleic acid molecules with RNA cleaving activity, which specifically cleave RNA encoded by an aryl hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3 gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT, and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086 and AAA19155 to AAA19222 represent their corresponding target sequences; AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and AAA21596 to AAA21688 represent their corresponding target sequences; AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to AAA23422 represent their corresponding target sequences. The ribozymes of the invention are used for modulating the synthesis, expression and/or stability of an mRNA encoding angiogenic factor, especially ARNT, integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are especially used to treat cancer, diabetic retinopathy, age related macular degeneration (ARMD), inflammation, and arthritis, as well as neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris, angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome, and other syndromes and diseases related to the levels of ARNT, Tie-2, integrin subunit alpha-6, or integrin subunit beta-3.

Sequence 17 BP; 4 A; 0 C; 0 G; 13 U; 0 other;

ery Match 1.0%; Score 12.2; DB 1; Length 17;
st Local Similarity 82.4%; Pred. No. 5.5e+02;
tches 14; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
     1590 AAATATAAAAGTAAATA 1606
          ||||| | || ||||||
       17 AAATAAATAAATAAATA 1
```

LT 853
2703/c
AAA22703 standard; RNA; 17 BP.

AAA22703;

19-JUN-2000 (first entry)

Integrin subunit beta 3 substrate sequence SEQ ID NO:5929.

Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis; integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme; hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic; ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD; dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis; age related macular degeneration; inflammation; neovascular glaucoma;

KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX
PR 27-MAR-1998; 98US-0079678.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -
XX
PS Claim 54; Page 237; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC and AAA19155 to AAA19222 represent their corresponding target sequences;
CC AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC AAA21596 to AAA21688 represent their corresponding target sequences;
CC AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC AAA23422 represent their corresponding target sequences. The ribozymes of
CC the invention are used for modulating the synthesis, expression and/or
CC stability of an mRNA encoding angiogenic factor, especially ARNT,
CC integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ Sequence 17 BP; 4 A; 0 C; 0 G; 13 U; 0 other;

Query Match 1.0%; Score 12.2; DB 1; Length 17;
Best Local Similarity 82.4%; Pred. No. 5.5e+02;
Matches 14; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
Qy       1590 AAATATAAAAGTAAATA 1606
              ||||| | || ||||||
Db         17 AAATAAATAAATAAATA 1
```

RESULT 854
AAA22706/c
ID AAA22706 standard; RNA; 17 BP.
XX
AC AAA22706;
XX
DT 19-JUN-2000 (first entry)
XX
DE Integrin subunit beta 3 substrate sequence SEQ ID NO:5932.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;

integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme; hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic; ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD; dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis; age related macular degeneration; inflammation; neovascular glaucoma; myopic degeneration; psoriasis; verruca vulgaris; angiofibroma; tuberous sclerosis; pot-wine stain; Sturge Weber syndrome; Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.

Homo sapiens.

WO9950403-A2.

07-OCT-1999.

24-MAR-1999; 99WO-US06507.

27-MAR-1998; 98US-0079678.

(RIBO-) RIBOZYME PHARM INC.

Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;

WPI; 1999-591315/50.

Novel ribozymes for modulating the synthesis, expression and/or stability of an mRNA encoding an angiogenic factors -

Claim 54; Page 237; 305pp; English.

The present invention describes enzymatic nucleic acid molecules with RNA cleaving activity, which specifically cleave RNA encoded by an aryl hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3 gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT, and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086 and AAA19155 to AAA19222 represent their corresponding target sequences; AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and AAA21596 to AAA21688 represent their corresponding target sequences; AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to AAA23422 represent their corresponding target sequences. The ribozymes of the invention are used for modulating the synthesis, expression and/or stability of an mRNA encoding angiogenic factor, especially ARNT, integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are especially used to treat cancer, diabetic retinopathy, age related macular degeneration (ARMD), inflammation, and arthritis, as well as neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris, angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome, and other syndromes and diseases related to the levels of ARNT, Tie-2, integrin subunit alpha-6, or integrin subunit beta-3.

Sequence 17 BP; 4 A; 0 C; 0 G; 13 U; 0 other;

```
uery Match              1.0%;  Score 12.2;  DB 1;  Length 17;
est Local Similarity   82.4%;  Pred. No. 5.5e+02;
latches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

      1590 AAATATAAAAGTAAATA 1606
           ||||| | || ||||||
        17 AAATAAATAAATAAATA 1

ULT 855
22899
  AAA22899 standard; RNA; 17 BP.

  AAA22899;
```

DT 19-JUN-2000 (first entry)
XX
DE Integrin subunit beta 3 substrate sequence SEQ ID NO:6125.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX
PR 27-MAR-1998; 98US-0079678.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -
XX
PS Claim 54; Page 249; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC and AAA19155 to AAA19222 represent their corresponding target sequences;
CC AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC AAA21596 to AAA21688 represent their corresponding target sequences;
CC AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC AAA23422 represent their corresponding target sequences. The ribozymes of
CC the invention are used for modulating the synthesis, expression and/or
CC stability of an mRNA encoding angiogenic factor, especially ARNT,
CC integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ Sequence 17 BP; 13 A; 0 C; 0 G; 4 U; 0 other;

```
  Query Match              1.0%;  Score 12.2;  DB 1;  Length 17;
  Best Local Similarity   64.7%;  Pred. No. 5.5e+02;
  Matches   11;  Conservative    3;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1590 AAATATAAAAGTAAATA 1606
              |||:| | || :|||:|
Db          1 AAAUAAAUAAAUAAAUA 17

RESULT 856
```

AA22900
D AAA22900 standard; RNA; 17 BP.
K
C AAA22900;
K
T 19-JUN-2000 (first entry)
C
S Integrin subunit beta 3 substrate sequence SEQ ID NO:6126.
C
W Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
W integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
W hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
W ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
W dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
W age related macular degeneration; inflammation; neovascular glaucoma;
W myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
W tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
W Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
C
O Homo sapiens.
C
P WO9950403-A2.
C
P 07-OCT-1999.
C
P 24-MAR-1999; 99WO-US06507.
C
P 27-MAR-1998; 98US-0079678.
C
A (RIBO-) RIBOZYME PHARM INC.
C
A Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
C
R WPI; 1999-591315/50.
C
T Novel ribozymes for modulating the synthesis, expression and/or
T stability of an mRNA encoding an angiogenic factors -
C
C Claim 54; Page 249; 305pp; English.
C
C The present invention describes enzymatic nucleic acid molecules with
C RNA cleaving activity, which specifically cleave RNA encoded by an aryl
C hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
C gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
C AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
C and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
C corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
C AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
C and AAA19155 to AAA19222 represent their corresponding target sequences;
C AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
C sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
C AAA21596 to AAA21688 represent their corresponding target sequences;
C AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
C for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
C AAA23422 represent their corresponding target sequences. The ribozymes of
C the invention are used for modulating the synthesis, expression and/or
C stability of an mRNA encoding angiogenic factor, especially ARNT,
C integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
C especially used to treat cancer, diabetic retinopathy, age related
C macular degeneration (ARMD), inflammation, and arthritis, as well as
C neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
C angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
C syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
C and other syndromes and diseases related to the levels of ARNT, Tie-2,
C integrin subunit alpha-6, or integrin subunit beta-3.

Sequence 17 BP; 13 A; 0 C; 0 G; 4 U; 0 other;

Query Match 1.0%; Score 12.2; DB 1; Length 17;
Best Local Similarity 64.7%; Pred. No. 5.5e+02;
Matches 11; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

1590 AAATATAAAAGTAAATA 1606
||||:| | || :|||:|
Db 1 AAAUAAAUAAAUAAAUA 17

RESULT 857
AAA22901
ID AAA22901 standard; RNA; 17 BP.
XX
AC AAA22901;
XX
DT 19-JUN-2000 (first entry)
XX
DE Integrin subunit beta 3 substrate sequence SEQ ID NO:6127.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX
PR 27-MAR-1998; 98US-0079678.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -
XX
PS Claim 54; Page 249; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC and AAA19155 to AAA19222 represent their corresponding target sequences;
CC AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC AAA21596 to AAA21688 represent their corresponding target sequences;
CC AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC AAA23422 represent their corresponding target sequences. The ribozymes of
CC the invention are used for modulating the synthesis, expression and/or
CC stability of an mRNA encoding angiogenic factor, especially ARNT,
CC integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ Sequence 17 BP; 13 A; 0 C; 0 G; 4 U; 0 other;

```
 Query Match             1.0%;  Score 12.2;  DB 1;  Length 17;
 Best Local Similarity   64.7%;  Pred. No. 5.5e+02;
 Matches   11;  Conservative    3;  Mismatches    3;  Indels    0;  Gaps    0;

y       1590 AAATATAAAAGTAAATA 1606
             |||:| | || :|||:|
b          1 AAAUAAAUAAAUAAAUA 17


ESULT 858
AA22902
D   AAA22902 standard; RNA; 17 BP.
X
C   AAA22902;
X
T   19-JUN-2000  (first entry)
X
E   Integrin subunit beta 3 substrate sequence SEQ ID NO:6128.
X
W   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
W   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
W   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
W   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
W   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
W   age related macular degeneration; inflammation; neovascular glaucoma;
W   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
W   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
W   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
X
S   Homo sapiens.
X
N   WO9950403-A2.
X
D   07-OCT-1999.
X
F   24-MAR-1999;   99WO-US06507.
X
R   27-MAR-1998;   98US-0079678.
X
A   (RIBO-) RIBOZYME PHARM INC.
X
I   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
X
R   WPI; 1999-591315/50.
X
T   Novel ribozymes for modulating the synthesis, expression and/or
T   stability of an mRNA encoding an angiogenic factors  -
X
S   Claim 54; Page 249; 305pp; English.
X
C   The present invention describes enzymatic nucleic acid molecules with
C   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
C   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
C   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
C   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
C   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
C   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
C   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
C   and AAA19155 to AAA19222 represent their corresponding target sequences;
C   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
C   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
C   AAA21596 to AAA21688 represent their corresponding target sequences;
C   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
C   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
C   AAA23422 represent their corresponding target sequences. The ribozymes of
C   the invention are used for modulating the synthesis, expression and/or
C   stability of an mRNA encoding angiogenic factor, especially ARNT,
C   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
C   especially used to treat cancer, diabetic retinopathy, age related
C   macular degeneration (ARMD), inflammation, and arthritis, as well as
C   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
C   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
C   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC  and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC  integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ  Sequence 17 BP; 13 A; 0 C; 0 G; 4 U; 0 other;

  Query Match             1.0%;  Score 12.2;  DB 1;  Length 17;
  Best Local Similarity   64.7%;  Pred. No. 5.5e+02;
  Matches   11;  Conservative    3;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1590 AAATATAAAAGTAAATA 1606
              |||:| | || :|||:|
Db          1 AAAUAAAUAAAUAAAUA 17


RESULT 859
AAA22903
ID  AAA22903 standard; RNA; 17 BP.
XX
AC  AAA22903;
XX
DT  19-JUN-2000  (first entry)
XX
DE  Integrin subunit beta 3 substrate sequence SEQ ID NO:6129.
XX
KW  Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW  integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW  hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW  ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW  dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW  age related macular degeneration; inflammation; neovascular glaucoma;
KW  myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW  tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW  Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS  Homo sapiens.
XX
PN  WO9950403-A2.
XX
PD  07-OCT-1999.
XX
PF  24-MAR-1999;   99WO-US06507.
XX
PR  27-MAR-1998;   98US-0079678.
XX
PA  (RIBO-) RIBOZYME PHARM INC.
XX
PI  Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR  WPI; 1999-591315/50.
XX
PT  Novel ribozymes for modulating the synthesis, expression and/or
PT  stability of an mRNA encoding an angiogenic factors  -
XX
PS  Claim 54; Page 249; 305pp; English.
XX
CC  The present invention describes enzymatic nucleic acid molecules with
CC  RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC  hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC  gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC  AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC  and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC  corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC  AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC  and AAA19155 to AAA19222 represent their corresponding target sequences;
CC  AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC  sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC  AAA21596 to AAA21688 represent their corresponding target sequences;
CC  AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC  for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC  AAA23422 represent their corresponding target sequences. The ribozymes of
CC  the invention are used for modulating the synthesis, expression and/or
CC  stability of an mRNA encoding angiogenic factor, especially ARNT,
CC  integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
```

CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ Sequence 17 BP; 13 A; 0 C; 0 G; 4 U; 0 other;

Query Match 1.0%; Score 12.2; DB 1; Length 17;
Best Local Similarity 64.7%; Pred. No. 5.5e+02;
Matches 11; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

Qy 1590 AAATATAAAAGTAAATA 1606
||||:| | || :|||:|
Db 1 AAAUAAAUAAAUAAAUA 17

RESULT 860
AAA22708/c
ID AAA22708 standard; RNA; 17 BP.
XX
AC AAA22708;
XX
DT 19-JUN-2000 (first entry)
XX
DE Integrin subunit beta 3 substrate sequence SEQ ID NO:5934.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX
PR 27-MAR-1998; 98US-0079678.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -
XX
PS Claim 54; Page 237; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC and AAA19155 to AAA19222 represent their corresponding target sequences;
CC AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC AAA21596 to AAA21688 represent their corresponding target sequences;
CC AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC AAA23422 represent their corresponding target sequences. The ribozymes of
CC the invention are used for modulating the synthesis, expression and/or
CC stability of an mRNA encoding angiogenic factor, especially ARNT,
CC integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ Sequence 17 BP; 3 A; 0 C; 1 G; 13 U; 0 other;

Query Match 1.0%; Score 12.2; DB 1; Length 17;
Best Local Similarity 82.4%; Pred. No. 5.5e+02;
Matches 14; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 617 CAAAAAACAACAAATAA 633
|||||| || ||||||
Db 17 CAAAAATAAATAAATAA 1

RESULT 861
ABS67982/c
ID ABS67982 standard; DNA; 18 BP.
XX
AC ABS67982;
XX
DT 29-NOV-2002 (first entry)
XX
DE PAF-AH DNA related oligonucleotide #20.
XX
KW Yeast; platelet activating factor acetylhydrolase; PAF-AH; ss;
KW diabetes mellitus; antidiabetic.
XX
OS Saccharomyces cerevisiae.
XX
PN US2002102231-A1.
XX
PD 01-AUG-2002.
XX
PF 31-JAN-2001; 2001US-0774414.
XX
PR 07-MAY-1999; 99US-0306970.
XX
PA (ICOS-) ICOS CORP.
XX
PI Dietsch GN, Peterman GM, Yu AS;
XX
DR WPI; 2002-673986/72.
XX
PT Preventing diabetes mellitus comprises administering a platelet
PT activating factor acetylhydrolase product to a subject at risk of
PT developing the disease -
XX
PS Disclosure; Page 14; 22pp; English.
XX
CC The invention relates to a method for preventing diabetes mellitus
CC comprising administering a platelet activating factor acetylhydrolase
CC (PAF-AH) product to a subject at risk of developing diabetes mellitus.
CC The method is also used to slow the progression of diabetes mellitus in a
CC patient suffering from the disease. This sequence represents a
CC Saccharomyces cerevisiae PAF-AH DNA related oligonucleotide.
XX
SQ Sequence 18 BP; 4 A; 1 C; 4 G; 9 T; 0 other;

Query Match 1.0%; Score 12.2; DB 1; Length 18;
Best Local Similarity 82.4%; Pred. No. 5.8e+02;
Matches 14; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1247 CAGATAAACAACAAATA 1263

```
                ||||||| ||| || ||
Db          17 CAGATAACCAATAATTA 1


RESULT 862
AAQ20160/c
ID   AAQ20160 standard; DNA; 18 BP.
XX
AC   AAQ20160;
XX
DT   01-APR-1992  (first entry)
XX
DE   Cross-linking oligomer 723 to target Herpes Simplex Virus I.
XX
KW   deoxyribonucleic acid; major groove; HSV;
KW   inverted polarity region; covalent cross-linking group; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1
FT                   /*tag=  a
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   2
FT                   /*tag=  b
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   3
FT                   /*tag=  c
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   4
FT                   /*tag=  d
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   5
FT                   /*tag=  e
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   7
FT                   /*tag=  f
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   9
FT                   /*tag=  g
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   10
FT                   /*tag=  h
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   11
FT                   /*tag=  i
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   misc_feature    12..18
FT                   /*tag=  j
FT                   /label= inverted_polarity_region
FT                   /note= "see comments"
FT   modified_base   13
FT                   /*tag=  k
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   14
FT                   /*tag=  l
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   15
FT                   /*tag=  m
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
FT   modified_base   17
FT                   /*tag=  n
FT                   /mod_base= OTHER
FT                   /note= "N-methyl-8-oxo-2'-deoxyadenine"
XX
PN   WO9118997-A.
XX
PD   12-DEC-1991.
XX
PF   24-MAY-1991;   91WO-1003680.
XX
PR   14-JAN-1991;   91US-0640654.
PR   25-MAY-1990;   90US-0529346.
XX
PA   (GILE-) GILEAD SCIE INC.
XX
PI   Matteucci MD,  Krawczyk S;
XX
DR   WPI; 1992-007480/01.
XX
PT   New sequence-specific non-photo-activated crosslinking agents -
PT   bind to the major groove of duplex DNA and are esp. useful for
PT   treating latent infections e.g. HIV
XX
PS   Example 4; Page 29; 42pp; English.
XX
CC   This oligomer contains an inverted polarity region formed from an
CC   o-xyloso dimer synthon. Residues 11 and 12 are linked via an
CC   o-xyloso group (i.e. nucleotides that have xylose sugar linked via
CC   the o-xylene ring). The sequence is designed to target the Herpes
CC   Simplex virus I beginning at nucleotide 10996 and to covalently
CC   cross-link to it. See also AAQ20151-Q20161.
XX
SQ   Sequence 18 BP; 13 A; 0 C; 0 G; 5 T; 0 other;

  Query Match             1.0%;  Score 12.2;  DB 1;  Length 18;
  Best Local Similarity   82.4%;  Pred. No. 5.8e+02;
  Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1045 TATTTATGTATTTATTT 1061
                ||||||| ||| | |||
Db         17 TATTTATTTATATTTTT 1


RESULT 863
AAQ30310/c
ID   AAQ30310 standard; DNA; 18 BP.
XX
AC   AAQ30310;
XX
DT   25-MAR-2003  (updated)
DT   07-DEC-1992  (first entry)
XX
DE   Oligomer HSV723 for forming triplex with HSV target duplex.
XX
KW   Herpes simplex virus I; AIDS; modified; HIV; RSV; HPV; malignancy;
KW   hepetitis; inflammation; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1
FT                   /*tag= a
FT                   /mod_base=  OTHER
FT                   /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT   modified_base   2
FT                   /*tag= b
FT                   /mod_base=  OTHER
FT                   /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT   modified_base   3
FT                   /*tag= c
FT                   /mod_base=  OTHER
FT                   /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT   modified_base   4
```

```
                     /*tag= d
                     /mod_base=  OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   5
                     /*tag= e
                     /mod_base=  OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   7
                     /*tag= f
                     /mod_base= OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   9
                     /*tag= g
                     /mod_base=  OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   10
                     /*tag= h
                     /mod_base=  OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   11
                     /*tag= i
                     /mod_base=  OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   13
                     /*tag= j
                     /mod_base=  OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   14
                     /*tag= k
                     /mod_base=  OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   15
                     /*tag= l
                     /mod_base=  OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     modified_base   17
                     /*tag=  m
                     /mod_base= OTHER
                     /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
     misc_feature    12..18
                     /*tag=  n
                     /label= inverted_polarity_region
                     /note= "see comments"
     misc_feature    11.12
                     /*tag=  o
                     /note= "o-xyloso dimer synthon linkage"

WO9209705-A1.

11-JUN-1992.

25-NOV-1991;   91WO-US08811.

23-NOV-1990;   90US-0617907.
18-JAN-1991;   91US-0643382.
08-APR-1991;   91US-0683420.
17-APR-1991;   91US-0686544.
17-APR-1991;   91US-0686546.
17-APR-1991;   91US-0686547.
27-SEP-1991;   91US-0766733.

(GILE-) GILEAD SCI INC.

Froehler B,  Krawczyk S,  Matteucci MD,  Milligan J;

WPI; 1992-217083/26.

New oligomers contg. modified bases - which form a triplex with
G-C doublet in a DNA duplex, for treating and diagnosing HIV,
hepatitis, herpes, malignancy and inflammation

Claim 12; Page 67; 77pp; English.
```

```
CC   The synthetic oligomer is capable of forming a triplex at
CC   physiological pH with a purine rich target sequence by coupling
CC   into the major groove of the duplex.   The specific target sequence
CC   of this oligomer is a herpes simplex virus I duplex beginning at
CC   nucleotide 10996 contg. a purine-rich region concentrated on
CC   one chain of the duplex.  The oligomer, and others like it are useful
CC   in diagnosis and therapy of diseases characterised by specific DNA
CC   duplex targets, e.g. respiratory syncytial virus, HIV, hepatitis,
CC   herpes, malignant tumours and inflammation. The triple helices form
CC   under mild conditions thus assays may be carried  out without
CC   subjecting the test specimen to harsh conditions.  The oligomer
CC   contains an inverted polarity region formed from an o-xyloso
CC   dimer synthon.  The linking gp. is o-xyloso (nucleotides have the 3'
CC   positions of xylose sugars linked via the o-xylene ring).  Two
CC   nucleotides are coupled through a xylene residue to form the dimer
CC   synthon.  This additional modifications may render the oligomer stable
CC   to nuclease activity.  The oligomer is able to inhibit gene expression,
CC   as verified by in vitro systems.
CC   See also AAQ25452-25501 and AAQ30226-448.
CC   (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ   Sequence 18 BP; 13 A; 0 C; 0 G; 5 T; 0 other;

  Query Match              1.0%;  Score 12.2;  DB 1;  Length 18;
  Best Local Similarity   82.4%;  Pred. No. 5.8e+02;
  Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1045 TATTTATGTATTTATTT 1061
              ||||||| ||| | |||
Db         17 TATTTATTTATATTTTT 1

RESULT 864
AAQ30368/c
ID   AAQ30368 standard; DNA; 18 BP.
XX
AC   AAQ30368;
XX
DT   25-MAR-2003  (updated)
DT   07-DEC-1992  (first entry)
XX
DE   Oligomer HUM beta 102 for forming triplex with IL-1 target duplex.
XX
KW   Human interleukin - 1 beta gene; herpes simplex; AIDS; modified;
KW   HIV; RSV; HPV; malignancy; hepatitis; inflammation; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base    2
FT                    /*tag= a
FT                    /mod_base= OTHER
FT                    /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT   modified_base    7
FT                    /*tag= b
FT                    /mod_base=  OTHER
FT                    /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT   modified_base    10
FT                    /*tag= c
FT                    /mod_base=  OTHER
FT                    /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT   modified_base    12
FT                    /*tag= d
FT                    /mod_base= OTHER
FT                    /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT   modified_base    14
FT                    /*tag= e
FT                    /mod_base= OTHER
FT                    /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT   misc_feature     13..18
FT                    /*tag= f
FT                    /label= inverted_polarity_region
FT                    /note= "see comments"
```

```
FT   misc_feature    12..13
FT                   /*tag=  g
FT                   /note= "o-xyloso dimer synthon linkage"
XX
PN   WO9209705-A1.
XX
PD   11-JUN-1992.
XX
PF   25-NOV-1991;   91WO-US08811.
XX
PR   23-NOV-1990;   90US-0617907.
PR   18-JAN-1991;   91US-0643382.
PR   08-APR-1991;   91US-0683420.
PR   17-APR-1991;   91US-0686544.
PR   17-APR-1991;   91US-0686546.
PR   17-APR-1991;   91US-0686547.
PR   27-SEP-1991;   91US-0766733.
XX
PA   (GILB-) GILEAD SCI INC.
XX
PI   Froehler B,  Krawczyk S,  Matteucci MD,  Milligan J;
XX
DR   WPI; 1992-217083/26.
XX
PT   New oligomers contg. modified bases - which form a triplex with
PT   G-C doublet in a DNA duplex, for treating and diagnosing HIV,
PT   hepatitis, herpes, malignancy and inflammation
XX
PS   Claim 12; Page 69; 77pp; English.
XX
CC   The synthetic oligomer is capable of forming a triplex at
CC   physiological pH with a purine rich target sequence by coupling
CC   into the major groove of the duplex.   The specific target sequence
CC   of this oligomer is the human interleukin -1 beta gene beginning at
CC   nucleotide 6379 contg. a purine rich sequence concd. on one strand
CC   of the duplex.  The oligomer, and others like it are useful in
CC   diagnosis and therapy of diseases characterised by specific DNA
CC   duplex targets, e.g. HPV; HER; HIV, hepatitis B, herpes, malignant
CC   tumours and inflammation. The triple helices form under mild conditions
CC   thus assays may be carried out without subjecting the test specimen to
CC   harsh conditions.  The oligomer contains an inverted polarity region
CC   formed from an o-xyloso dimer synthon.  The linking gp. is o-xyloso
CC   (nucleotides have the 3' positions of xylose sugars linked via the
CC   o-xylene ring).  Two nucleotides are coupled through a xylene residue
CC   to form the dimer synthon.  This additional modifications may render
CC   the oligomer stable to nuclease activity.  The oligomer is able to
CC   inhibit gene expression, as verified by in vitro systems.
CC   See also AAQ25452-25501 and AAQ30226-448.
CC   (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ   Sequence 18 BP; 5 A; 0 C; 0 G; 13 T; 0 other;

  Query Match             1.0%;  Score 12.2;  DB 1;  Length 18;
  Best Local Similarity   82.4%;  Pred. No. 5.8e+02;
  Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1590 AAATATAAAAGTAAATA 1606
              ||||||| ||  |||||
Db         17 AAATATATAATAAAATA 1


RESULT 865
ABZ10596
ID   ABZ10596 standard; DNA; 18 BP.
XX
AC   ABZ10596;
XX
DT   16-JAN-2003  (first entry)
XX
DE   Haematopoietic cell proliferation disorder related oligonucleotide #736.
XX
KW   Human; haematopoietic cell proliferation disorder; cytostatic;
KW   gene therapy; lymphocytic leukaemia; acute myelogenous leukaemia;
KW   cytosine methylation state; probe; primer; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200277272-A2.
XX
PD   03-OCT-2002.
XX
PF   26-MAR-2002; 2002WO-EP03401.
XX
PR   26-MAR-2001; 2001US-278333P.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Berlin K,  Braun A,  Distler J,  Guetig D,  Howe A,  Mueller J;
PI   Olek A,  Piepenbrock C,  Adorjan P,  Grabs G,  Lesche R,  Leu B;
PI   Lewin A,  Lipscher E,  Maier S,  Model F,  Mueller V,  Otto T;
PI   Pelet C,  Schwope I,  Ziebarth H;
XX
DR   WPI; 2003-018942/01.
XX
PT   Detecting and differentiating between hematopoietic cell proliferative
PT   disorders, comprises contacting a target nucleic acid with a reagent
PT   that distinguishes between methylated and non-methylated CpG
PT   dinucleotides -
XX
PS   Claim 15; Page 52; 117pp; English.
XX
CC   The present invention describes a method for detecting and
CC   differentiating between haematopoietic cell proliferative disorders
CC   associated with at least 1 gene and/or their regulatory regions in a
CC   subject. The method comprises contacting a target nucleic acid in a
CC   biological sample obtained from the subject with at least 1 reagent,
CC   which distinguishes between methylated and non-methylated CpG
CC   dinucleotides within the target nucleic acid. ABZ09861 to ABZ11118
CC   represent specifically claimed nucleotide sequences from the present
CC   invention. Oligonucleotides from the present invention can be used: for
CC   differentiating between healthy haematopoietic cells and proliferative
CC   disorder haematopoietic cells; for differentiating between acute
CC   lymphocytic leukaemia and acute myelogenous leukaemia; as probes for
CC   determining the cytosine methylation state and/or single nucleotide
CC   polymorphisms (SNPs) of haematopoietic cell proliferation disorder
CC   related sequences and their complements; and as primers for the
CC   amplification of haematopoietic cell proliferation disorder related
CC   DNA sequences. The nucleotide sequences from the present invention can
CC   also be used for detecting a predisposition to, differentiation between
CC   subclasses, diagnosis, prognosis, treatment and/or monitoring of
CC   haematopoietic cell proliferative disorders. The present method enables
CC   a highly specific classification of haematopoietic cell proliferative
CC   disorders allowing for improved and informed treatment of patients.
XX
SQ   Sequence 18 BP; 3 A; 0 C; 4 G; 11 T; 0 other;

  Query Match             1.0%;  Score 12.2;  DB 1;  Length 18;
  Best Local Similarity   82.4%;  Pred. No. 5.8e+02;
  Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1286 TTGTTTATCTGAAATTT 1302
              ||||||  |  |||||||
Db          1 TTGTTTTTTGGAAATTT 17


RESULT 866
ABL46342/c
ID   ABL46342 standard; DNA; 20 BP.
XX
AC   ABL46342;
XX
DT   26-APR-2002  (first entry)
XX
DE   Human interleukin-1 beta oligonucleotide SEQ ID NO:309.
XX
```

KW Nucleic acid accessible hybridisation site; detection; hybridisation;
KW characterisation; identification; nucleic acid structure; diagnosis;
KW PCR primer; probe; ss.

OS Homo sapiens.
OS Synthetic.

PN WO200198537-A2.

PD 27-DEC-2001.

PF 15-JUN-2001; 2001WO-US19401.

PR 17-JUN-2000; 2000US-212308P.
PR 15-JUN-2001; 2001US-0212308.

PA (THIR-) THIRD WAVE TECHNOLOGIES INC.

PI Lyamichev V, Allawi H, Dong F, Neri BP, Vener IT;

DR WPI; 2002-049698/06.

PT Identifying oligonucleotides hybridizing to nucleic acids containing
PT secondary structure, useful in clinical diagnosis, comprises
PT identifying primers that interact with the target to form an extension
PT product under amplification conditions -

PS Claim 48; Fig 81A; 409pp; English.

CC The present invention describes a method for identifying oligonucleotides
CC with desired hybridisation properties to nucleic acid targets containing
CC secondary structure. The method comprises amplifying a target nucleic
CC acid having at least one accessible and one inaccessible site. Primers
CC that form an extension product are identified as the oligonucleotides
CC which can interact with the folded target nucleic acid. Oligonucleotides
CC from the present invention can be used in novel detection methods for
CC clinical diagnostic purposes, including the detection and identification
CC of pathogenic organisms (e.g. HIV). The method allows the ability to
CC rapidly analyse nucleic acid structures. ABL46034 to ABL46367 represent
CC sequences used in the exemplification of the present invention.

XX

SQ Sequence 20 BP; 7 A; 5 C; 2 G; 6 T; 0 other;

```
Query Match             1.0%;  Score 12.2;  DB 1;  Length 20;
Best Local Similarity   82.4%;  Pred. No. 6.2e+02;
Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

        552 TTTTTCATTGTACCATG 568
            | ||||||  ||||  |||
         17 TATTTCATGGTACAATG 1
```

```
SULT 867
Z37709
```

AC AAZ37709 standard; DNA; 20 BP.

XX

AC AAZ37709;

XX

DT 07-JAN-2000 (first entry)

XX

DE Human mdm2 phosphorothioate oligodeoxynucleotide #239.

XX

KW Human mdm2 gene; proliferation; tumour; phosphorothioate; p53;
KW cancer; antisense; modulation; oligonucleotide; expression;
KW inhibition; hyperproliferation; blood cancer; brain cancer;
KW breast cancer; lung cancer; soft tissue cancer; psoriasis; fibrosis;
KW atherosclerosis; restenosis; ss.

XX

OS Synthetic.
OS Homo sapiens.

XX

PN WO9949065-A1.

XX

PD 30-SEP-1999.

XX

PF 26-MAR-1999; 99WO-US06702.

XX

PR 26-MAR-1998; 98US-0048810.

XX

PA (ISIS-) ISIS PHARM INC.

XX

PI Miraglia LJ, Nero P, Graham MJ, Monia BP, Cowsert LM;

XX

DR WPI; 1999-610754/52.

XX

PT New antisense compounds used to treat eg. hyperproliferative conditions
PT -

XX

PS Example 9; Page 54; 157pp; English.

XX

CC AAZ37473-Z37738 represent human mdm2 phosphorothioate oligonucleotides.
CC AAZ37471, AAZ37472, AAZ37739, AAZ37740 and AAZ37741 are used in the
CC exemplification of the present invention. The present invention
CC describes novel nucleotide antisense compounds, targetted to the 5'
CC untranslated, translation termination codon, or 3' untranslated region
CC of a nucleic acid encoding human mdm2, that modulates expression of
CC human mdm2. The oligonucleotides mediate their effect by antisense
CC inhibition of hyperproliferative gene expression. The antisense compound
CC is used to treat an animal having a disease or condition associated
CC with mdm2, particularly a hyperproliferative condition, more
CC particularly cancer, especially of the blood, brain, breast, lung or soft
CC tissue, or psoriasis, fibrosis, atherosclerosis or restenosis.

XX

SQ Sequence 20 BP; 9 A; 1 C; 2 G; 8 T; 0 other;

```
  Query Match             1.0%;  Score 12.2;  DB 1;  Length 20;
  Best Local Similarity   82.4%;  Pred. No. 6.2e+02;
  Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1603 AATATGAAACATTTAAA 1619
              |||| |  |||||||||
Db          2 AATAAGTTACATTTAAA 18
```

```
RESULT 868
AAS29478
```

ID AAS29478 standard; DNA; 20 BP.

XX

AC AAS29478;

XX

DT 21-NOV-2001 (first entry)

XX

DE Human mdm2 antisense oligonucleotide 31618.

XX

KW Human; mdm2; hyperproliferative disorder; cancer; psoriasis;
KW atherosclerosis; tumour; cytostatic; anti psoriatic;
KW anti arteriosclerotic; vasotropic; antisense; phosphorothioate; ss.

XX

OS Homo sapiens.

XX

```
FH   Key             Location/Qualifiers
FT   modified_base   1..20
FT                   /*tag= a
FT                   /mod_base= OTHER
FT                   /note= "OTHER= All phosphorothioate linkages,
FT                         additionally bases 1-6 and bases 15-20 are
FT                         2'-O-methoxyethyl bases, and bases 7-14 are
FT                         deoxynucleotides"
```

XX

PN US2001016575-A1.

XX

PD 23-AUG-2001.

XX

PF 02-JAN-2001; 2001US-0752983.

XX

PR 26-MAR-1999; 99US-0280805.

R 26-MAR-1998; 98US-0048810.
X
A (MIRA/) MIRAGLIA L J.
A (NERO/) NERO P.
A (GRAH/) GRAHAM M J.
A (MONI/) MONIA B P.
A (COWS/) COWSERT L M.
X
I Miraglia LJ, Nero P, Graham MJ, Monia BP, Cowsert LM;
X
R WPI; 2001-535565/59.
X
T An antisense compound, useful for treating e.g. cancer, comprises
T nucleobases targeted a region (e.g. translation termination codon
T region) of a nucleic acid encoding human mdm2 -
X
S Example 9; Page 18; 81pp; English.
X
C The present invention relates to antisense compounds, 8-30 nucleobases
C in length targeted to the 5' untranslated region, translation
C termination codon region, 3' untranslated region, coding region or
C translation start site of a nucleic acid encoding human mdm2, where
C the antisense compound modulates the expression of human mdm2. The
C antisense oligonucleotides of the invention are useful for encoding
C human mdm2 and for inhibiting the expression of human mdm2. They may be
C used for treating an animal having a disease or condition associated
C with amplification of mdm2 gene or overexpression of mdm2 e.g. a
C hyperproliferative disorder such as cancer (blood, brain, breast, lung,
C or a soft tissue cancer) and psoriasis, fibrosis, atherosclerosis or
C restenosis, tumours, colorectal carcinoma and chronic myelogenous
C leukemia. The antisense compound may be administered with a
C chemotherapeutic agent to overcome drug resistance. The antisense
C compound reduces hyperproliferation of human cells. The method, which
C involves the use of the antisense compound, is also useful for detecting
C the role of mdm2 expression in various cell functions and physiological
C processes and useful in both clinical research and diagnostic tools.
C AAS29242-AAS29507 represent the human mdm2 antisense oligonucleotides
C of the present invention.
X
Q Sequence 20 BP; 9 A; 1 C; 2 G; 8 T; 0 other;

Query Match 1.0%; Score 12.2; DB 1; Length 20;
Best Local Similarity 82.4%; Pred. No. 6.2e+02;
Matches 14; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

y 1603 AATATGAAACATTTAAA 1619
|||| | |||||||||
b 2 AATAAGTTACATTTAAA 18

ESULT 869
AF80863
D AAF80863 standard; DNA; 20 BP.
X
C AAF80863;
X
T 02-MAY-2001 (first entry)
X
E Human mdm2 phosphorothioate oligonucleotide #237.
X
W Antisense; mdm2; hyperproliferation; cancer; psoriasis; ss.
X
S Homo sapiens.
X
N US6184212-B1.
X
D 06-FEB-2001.
X
F 26-MAR-1999; 99US-0280805.
X
R 26-MAR-1998; 98US-0048810.
X
A (ISIS-) ISIS PHARM INC.
XX
PI Miraglia LJ, Nero P, Graham MJ, Monia BP, Cowsert LM;
XX
DR WPI; 2001-190948/19.
XX
PT Novel antisense compound 8-30 nucleobases in length targeted to a
PT nucleic acid molecule encoding human mdm-2 useful for modulating the
PT expression of human mdm-2 and reducing hyperproliferation of human
PT cells -
XX
PS Example 9; Column 31; 77pp; English.
XX
CC The present invention relates to an antisense compound 8-30
CC nucleobases in length targeted to nucleobases 1-308 of the
CC 5' untranslated region, 1776-1806 of the translation termination
CC codon region or 1818-2370 of the 3' untranslated region of a
CC nucleic acid molecule encoding human mdm-2. The invention is
CC useful for reducing hyperproliferation of human cells,
CC modulating the expression of mdm2 in human cells or tissues
CC or in vitro. The hyperproliferative disorder includes cancer or
CC psoriasis.
XX
SQ Sequence 20 BP; 9 A; 1 C; 2 G; 8 T; 0 other;

Query Match 1.0%; Score 12.2; DB 1; Length 20;
Best Local Similarity 82.4%; Pred. No. 6.2e+02;
Matches 14; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1603 AATATGAAACATTTAAA 1619
|||| | |||||||||
Db 2 AATAAGTTACATTTAAA 18

RESULT 870
AAA14463/c
ID AAA14463 standard; RNA; 21 BP.
XX
AC AAA14463;
XX
DT 21-AUG-2000 (first entry)
XX
DE AUUUA RNA target sequence.
XX
KW AUUUA sequence; RNA target molecule; RNA binding protein identification;
KW ss.
XX
OS Synthetic.
XX
PN WO200020637-A1.
XX
PD 13-APR-2000.
XX
PF 16-SEP-1999; 99WO-US21672.
XX
PR 02-OCT-1998; 98US-0165868.
XX
PA (MESS-) MESSAGE PHARM INC.
XX
PI Giordano T, Beach DL, Temeles GL;
XX
DR WPI; 2000-303802/26.
XX
PT Nucleic acid molecules useful for identifying compounds affecting
PT interactions between RNA molecules and identifying RNA binding proteins
PT -
XX
PS Example 1; Page 33; 58pp; English.
XX
CC The invention relates to mRNA sequences which bind to RNA binding
CC proteins, and their use for identifying RNA binding proteins and
CC compounds which have an effect on the interactions between an RNA
CC binding protein and an RNA molecule. The disclosed sequences are the 3'
CC untranslated region (3' UTR) sequences APP-R1, APP-D3 and APP-I1 from

the human amyloid precursor protein mRNA (AAA14456-A14458); the 3' UTR of human interleukin-10 (IL-10) mRNA (AAA14459); the 3' UTR of human erb-B2 mRNA (AAA14460); and the 5' UTR of human insulin-like growth factor I receptor (IGF-IR) mRNA (AAA14461). The disclosed mRNA sequences may be used to identify compounds affecting interactions between an RNA molecule comprising the sequence and an RNA binding protein. Such compounds can then be included with a carrier in pharmaceutical compositions for altering expression of a gene comprising the sequences, which can be administered to individuals or cells requiring altered expression of the gene. The mRNA sequences are also useful to identify RNA binding proteins which interact with them. Compounds identified as having the ability to affect such RNA binding interactions may therefore be useful as drugs for modulating protein levels in disease states. The present sequence represents an AUUUA RNA sequence used as a target molecule in an exemplification of the invention in an assay for detecting interactions between RNA molecules and RNA binding proteins.

Sequence 21 BP; 6 A; 0 C; 0 G; 15 U; 0 other;

```
Query Match             1.0%;  Score 12.2;  DB 1;  Length 21;
Best Local Similarity   82.4%;  Pred. No. 6.3e+02;
Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

       1590 AAATATAAAAGTAAATA 1606
            ||||| | || ||||||
         20 AAATAAATAAATAAATA 4
```

SULT 871
D49639/c
AAD49639 standard; mRNA; 21 BP.

AAD49639;

24-MAR-2003 (first entry)

Human adenylate uridylate-rich element (ARE) motif mRNA #1.

Amyloidosis; haemophilia; Alzheimer's disease; atherosclerosis; cancer; gigantism; dwarfism; hypothyroidism; hyperthyroidism; cystic fibrosis; autoimmune disorder; aging; inflammation; diabetes; obesity; anorectic; neurodegenerative disorder; Parkinson's disease; gene therapy; virucide; haemostatic; antibacterial; nootropic; neuroprotective; cytostatic; fungicide; human; adenylate uridylate-rich element; ARE; ss.

Homo sapiens.

WO200283953-A1.

24-OCT-2002.

11-APR-2002; 2002WO-US11757.

11-APR-2001; 2001US-282965P.

(PTCT-) PTC THERAPEUTICS INC.

Rando R, Welch E;

WPI; 2003-075561/07.

Identifying a test compound that binds to a target RNA molecule for treating or preventing amyloidosis, hemophilia, cancer, gigantism, diabetes, by contacting a detectably labeled target RNA molecule with a library of test compounds -

Example; Page 18; 152pp; English.

The invention relates to a method for identifying a test compound that binds to a target RNA molecule, which comprises contacting a detectably labelled target RNA molecule with a library of test compounds under conditions that permit direct binding of the labelled target RNA to a member of the library of test compounds so that a detectably labeled target RNA:test compound complex is formed. The method is useful for screening libraries of compounds for those that are selectively bind to a pre-selected target RNA. The compounds are useful for inhibiting the formation of a specific bound RNA:host cell factor complexes in vivo. They are also useful for treating or preventing diseases associated with overproduction or decreased protein function, such as amyloidosis, haemophilia, Alzheimer's disease, atherosclerosis, cancer, gigantism, dwarfism, hypothyroidism, hyperthyroidism, autoimmune disorders, aging, inflammation, cystic fibrosis, diabetes, obesity, neurodegenerative disorders, Parkinson's disease or infections (bacterial, viral, fungal). The invention is also used in gene therapy. The present sequence is human adenylate uridylate-rich element (ARE) motif mRNA. This sequence is used to illustrate the method of the invention.

Sequence 21 BP; 6 A; 0 C; 0 G; 15 U; 0 other;

```
  Query Match             1.0%;  Score 12.2;  DB 1;  Length 21;
  Best Local Similarity   82.4%;  Pred. No. 6.3e+02;
  Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1590 AAATATAAAAGTAAATA 1606
              ||||| | || ||||||
Db         20 AAATAAATAAATAAATA 4
```

RESULT 872
AAL50228/c
AAL50228 standard; mRNA; 21 BP.

AAL50228;

13-FEB-2003 (first entry)

Human ARE-mRNA sequence #1.

ARE-mRNA; protein secretion inhibition; ARE-mRNA regulation; inflammation; arthritis; autoimmune disease; septic shock; blood clot; stroke; TNFalpha; tumour necrosis factor alpha; antiinflammatory; antiarthritic; antibacterial; immunosuppressive; cerebroprotective; antipyretic; immunomodulator; adenylate-uridylate rich element; ss.

Homo sapiens.

WO200283842-A2.

24-OCT-2002.

08-APR-2002; 2002WO-US10898.

10-APR-2001; 2001US-282974P.

(MESS-) MESSAGE PHARM INC.

Giordano T, Sturgess MA;

WPI; 2003-046924/04.

Modulating Adenylate-Uridylate Rich element-mRNA regulation involves administering new amide compound that inhibits secretion of protein encoded by ARE-mRNA, useful for treating inflammation, arthritis and autoimmune diseases -

Disclosure; Fig 5; 147pp; English.

The present invention relates to a method of modulating the regulation of an adenylate-uridylate rich element (ARE)-mRNA, which involves administering new compounds that inhibits secretion of a protein encoded by an ARE-mRNA. This can be used in the treatment of inflammation, arthritis, autoimmune diseases, septic shock, blood clot, stroke, fever, acute respiratory distress syndrome (ARDS) and cachexia. The present sequence is an ARE-mRNA shown in the exemplification of the invention.

Sequence 21 BP; 6 A; 0 C; 0 G; 1 T; 14 U; 0 other;

```
 Query Match             1.0%;  Score 12.2;  DB 1;  Length 21;
 Best Local Similarity   82.4%;  Pred. No. 6.3e+02;
 Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

y       1590 AAATATAAAAGTAAATA 1606
             ||||| | || ||||||.
b         20 AAATAAATAAATAAATA 4


ESULT 873
AL53707/c
D   AAL53707 standard; RNA; 21 BP.
X
C   AAL53707;
X
T   07-FEB-2003  (first entry)
X
E   Adenylate Uridylate-rich element motif SEQ ID No 1.
X
W   Target RNA; target RNA:support-attached test compound; flow cytometry;
W   mass spectrometry; high-throughput screening; RNA motif; ss.
X
S   Homo sapiens.
X
N   WO200283837-A1.
X
D   24-OCT-2002.
X
F   11-APR-2002; 2002WO-US11758.
X
R   11-APR-2001; 2001US-282966P.
X
A   (PTCT-) PTC THERAPEUTICS INC.
X
I   Almstead NG;
X
R   WPI; 2003-075534/07.
X
T   Identifying a test compound that binds to a target RNA molecule by
T   separating the detectably labeled target RNA:support-attached test
T   compound complex from uncomplexed target RNA molecules and test
T   compounds by flow cytometry -
X
S   Disclosure; Page 16; 131pp; English.
X
C   The invention relates to a novel method for identifying a test compound
C   that binds to a target RNA molecule comprising separating the detectably
C   labeled target RNA:support-attached test compound complex from
C   uncomplexed target RNA molecules and test compounds. The separating
C   process is carried out by flow cytometry and determining a structure of
C   the type of test compound of the RNA:support-attached test compound
C   complex by mass spectrometry. The method is useful for high-throughput
C   screening of libraries of compounds to identify pharmaceutical leads.
C   This polynucleotide sequence represents one of the target RNA motifs/
C   regions of the invention.
XX
SQ   Sequence 21 BP; 6 A; 0 C; 0 G; 15 U; 0 other;

  Query Match             1.0%;  Score 12.2;  DB 1;  Length 21;
  Best Local Similarity   82.4%;  Pred. No. 6.3e+02;
  Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1590 AAATATAAAAGTAAATA 1606
              ||||| | || ||||||
Db         20 AAATAAATAAATAAATA 4


RESULT 874
AAV58890
ID   AAV58890 standard; DNA; 17 BP.
XX
AC   AAV58890;
XX
DT   20-JAN-1999  (first entry)
XX
DE   Primer C5 for Cytochrome C551 I coding sequence.
XX
KW   Cytochrome C551; vitamin C production; electron transfer mediator;
KW   aldehyde production; ketone production; carboxylic acid production;
KW   alcohol dehydrogenase; aldehyde dehydrogenase; PCR primer; ss.
XX
OS   Synthetic.
OS   Gluconobacter oxydans.
XX
PN   EP869175-A2.
XX
PD   07-OCT-1998.
XX
PF   27-MAR-1998;   98EP-0105608.
XX
PR   04-APR-1997;   97EP-0105583.
XX
PA   (HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX
PI   Asakura A,  Hoshino T,  Shinjoh M,  Tomiyama N;
XX
DR   WPI; 1998-508491/44.
XX
PT   New Gluconobacter cytochrome c551 polypeptides I and II - useful as
PT   electron transfer mediators and especially for producing vitamin C
XX
PS   Example 2; Fig 2; 22pp; English.
XX
CC   This sequence is a primer for DNA encoding the Gluconobacter cytochrome
CC   C551 I of the invention. The cytochrome C551 I protein has: (a) a
CC   molecular weight of 17-20kDA; (b) an absorption spectrum (for reduced
CC   form) with alpha, beta and gamma peaks at 551, 522 and 417 nm
CC   respectively; (c) a haem content of about 1 mole/mole protein; and (d) an
CC   isoelectric point of about 3.95. The novel cytochrome c is especially
CC   useful for producing vitamin C, as it is an electron transfer mediator
CC   which improves production of aldehydes, ketones and carboxylic acids from
CC   corresponding substrates in the presence of alcohol dehydrogenase and
CC   aldehyde dehydrogenase enzymes (AADH). It especially improves production
CC   of 2-KGA (an intermediate of vitamin C) from L-sorbose or D-sorbose. It
CC   can also be used as a source for protein-protein conjugates such as
CC   AADH-cytochrome c551 to improve total electron transfer efficiency.
XX
SQ   Sequence 17 BP; 8 A; 1 C; 1 G; 2 T; 5 other;

  Query Match             1.0%;  Score 12;  DB 1;  Length 17;
  Best Local Similarity   71.4%;  Pred. No. 6e+02;
  Matches   10;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1250 ATAAACAACAAATA 1263
              ||:||:||:||:||
Db          1 ATHAAYAAYAARTA 14


RESULT 875
AAV58891/c
ID   AAV58891 standard; DNA; 17 BP.
XX
AC   AAV58891;
XX
DT   20-JAN-1999  (first entry)
XX
DE   Primer C5R for Cytochrome C551 I coding sequence.
XX
KW   Cytochrome C551; vitamin C production; electron transfer mediator;
KW   aldehyde production; ketone production; carboxylic acid production;
KW   alcohol dehydrogenase; aldehyde dehydrogenase; PCR primer; ss.
XX
OS   Synthetic.
OS   Gluconobacter oxydans.
XX
```

RN EP869175-A2.
CC
DT 07-OCT-1998.
CC
PD 27-MAR-1998; 98EP-0105608.
CC
PR 04-APR-1997; 97EP-0105583.
CC
PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
CC
PI Asakura A, Hoshino T, Shinjoh M, Tomiyama N;
CC
DR WPI; 1998-508491/44.
CC
PT New Gluconobacter cytochrome c551 polypeptides I and II - useful as
PT electron transfer mediators and especially for producing vitamin C
CC
PS Example 2; Fig 2; 22pp; English.
CC
CC This sequence is a primer for DNA encoding the Gluconobacter cytochrome
CC C551 I of the invention. The cytochrome C551 I protein has: (a) a
CC molecular weight of 17-20kDA; (b) an absorption spectrum (for reduced
CC form) with alpha, beta and gamma peaks at 551, 522 and 417 nm
CC respectively; (c) a haem content of about 1 mole/mole protein; and (d) an
CC isoelectric point of about 3.95. The novel cytochrome c is especially
CC useful for producing vitamin C, as it is an electron transfer mediator
CC which improves production of aldehydes, ketones and carboxylic acids from
CC corresponding substrates in the presence of alcohol dehydrogenase and
CC aldehyde dehydrogenase enzymes (AADH). It especially improves production
CC of 2-KGA (an intermediate of vitamin C) from L-sorbose or D-sorbose. It
CC can also be used as a source for protein-protein conjugates such as
CC AADH-cytochrome c551 to improve total electron transfer efficiency.
CC
SQ Sequence 17 BP; 2 A; 1 C; 1 G; 8 T; 5 other;

Query Match 1.0%; Score 12; DB 1; Length 17;
Best Local Similarity 71.4%; Pred. No. 6e+02;
Matches 10; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

Qy 1250 ATAAACAACAAATA 1263
||:||:||:||:||
Db 17 ATHAAYAAYAARTA 4

RESULT 876
AAD52331
ID AAD52331 standard; DNA; 20 BP.
XX
AC AAD52331;
XX
DT 02-MAY-2003 (first entry)
XX
DE Human IFNGR2 antisense oligonucleotide, ISIS #142809.
XX
KW Antisense; interferon gamma receptor 2; autoimmune disorder; cancer;
KW autoimmune thyroiditis; autoimmune insulinitis; multiple sclerosis;
KW diabetes; autoimmune arthritis; Crohn's disease; apoptosis; IFNGR2;
KW gene therapy; prophylaxis; human; phosphorothioate; ss.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT modified_base 1..20
FT /*tag= a
FT /mod_base= OTHER
FT /note= "Phosphorothioate backbone; All cytidine
FT residues are 5-methylcytidines"
FT modified_base 1..5
FT /*tag= b
FT /mod_base= OTHER
FT /note= "2'-methoxyethyl nucleotides"
FT modified_base 16..20
FT /*tag= c
FT /mod_base= OTHER
FT /note= "2'-methoxyethyl nucleotides"
XX
PN WO200288163-A1.
XX
PD 07-NOV-2002.
XX
PF 16-APR-2002; 2002WO-US12007.
XX
PR 26-APR-2001; 2001US-0843377.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Bennett CF, Watt AT;
XX
DR WPI; 2003-156688/15.
XX
PT New antisense oligonucleotides for modulating Interferon gamma receptor
PT 2, particularly useful for treating autoimmune disorders (e.g. multiple
PT sclerosis or Crohn's disease), cancers or diseases caused by aberrant
PT apoptosis -
XX
PS Example 15; Page 86; 127pp; English.
XX
CC The invention relates to antisense compounds, composition and methods for
CC modulating the expression of human interferon gamma receptor 2 (IFNGR2).
CC The compositions comprise antisense compounds targetted to nucleic acids
CC encoding IFNGR2. Antisense compounds of the invention are useful for
CC treating diseases or conditions associated with IFNGR2, e.g. autoimmune
CC disorder (e.g. autoimmune thyroiditis, diabetes, multiple sclerosis,
CC autoimmune arthritis, autoimmune insulinitis or Crohn's disease), cancer,
CC or a disease/disorder caused by aberrant apoptosis. They are also useful
CC for diagnostics, therapeutics, prophylaxis or as research reagents or
CC kits. The invention is useful in gene therapy. The present sequence is
CC an antisense oligonucleotide targetted to human IFNGR2 DNA.
XX
SQ Sequence 20 BP; 6 A; 2 C; 5 G; 7 T; 0 other;

Query Match 1.0%; Score 12; DB 1; Length 20;
Best Local Similarity 75.0%; Pred. No. 6.6e+02;
Matches 15; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

Qy 820 TGGAAATCCTGGATTTTTTT 839
| ||||| ||||| ||| |
Db 1 TAGAAATGCTGGAAGTTTCT 20

RESULT 877
AAF74938/c
ID AAF74938 standard; DNA; 21 BP.
XX
AC AAF74938;
XX
DT 23-MAY-2001 (first entry)
XX
DE Human CD40L promoter sequence PCR primer Pcd3 SEQ ID NO:35.
XX
KW Human; CD40L; promoter; CD40 ligand promoter; rheumatoid arthritis;
KW diagnosis; antiarthritic; antirheumatic; immunosuppressive;
KW antiinflammatory; inflammatory disease; autoimmune disease;
KW PCR primer; ss.
XX
OS Homo sapiens.
XX
PN WO200119844-A1.
XX
PD 22-MAR-2001.
XX
PF 13-SEP-2000; 2000WO-US24966.
XX
PR 13-SEP-1999; 99US-0153625.
XX

PA (NYRE-) NEW YORK SOC RELIEF RUPTURED & CRIPPLED.
XX
PI Crow MK, Li Y;
XX
DR WPI; 2001-244776/25.
XX
PT New altered CD40L promoter for use in the study, diagnosis and
PT treatment of a variety of inflammatory disorders and autoimmune
PT diseases, such as rheumatoid arthritis -
CX
PS Example 1; Fig 2; 90pp; English.
CX
CC The present invention describes an isolated, purified nucleic acid,
CC which is an altered CD40 ligand (CD40L) promoter (I) for CD40 ligand,
CC having residues 331-455 of the sequence comprising 455 nucleotides given
CC in AAF74905 where A in the wild type sequence at position 331
CC (corresponding to position -125) is replaced with C. (I) has
CC antiarthritic, antirheumatic, immunosuppressive and antiinflammatory
CC activities, and can be used in gene therapy. (I) is useful in the study,
CC diagnosis and treatment of inflammatory and autoimmune diseases, as well
CC as diseases in which elevated expression of CD40L is a factor,
CC e.g., rheumatoid arthritis. The present sequence represents a PCR primer
CC for the human CD40L promoter sequence, which is used in an example from
CC the present invention.
CX
SQ Sequence 21 BP; 5 A; 4 C; 2 G; 10 T; 0 other;

Query Match 1.0%; Score 12; DB 1; Length 21;
Best Local Similarity 75.0%; Pred. No. 6.8e+02;
Matches 15; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

Qy 1251 TAAACAACAAATAATTTTTT 1270
||||.||.|||.||.|||.|
Db 20 TAAAGAAGAAACAAGTTTCT 1

RESULT 878
AAT56318/c
ID AAT56318 standard; RNA; 15 BP.
CX
AC AAT56318;
CX
DT 25-MAR-2003 (updated)
DT 14-MAY-1997 (first entry)
CX
DE Mouse TNF-a hammerhead ribozyme target sequence (nt position 1308).
CX
KW Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW intercellular adhesion molecule; rel A; tumour necrosis factor;
KW TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW translocation; chronic myelogenous leukaemia; CML; cancer;
KW Philadelphia chromosome; inflammation; autoimmune disease;
KW atherosclerosis; myocardial infarction; stroke; restenosis;
KW transplant rejection; rheumatoid arthritis; psoriasis;
KW myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW human immunodeficiency virus; acquired immune deficiency syndrome;
KW AIDS; ss.
CX
OS Mus musculus.
CX
PN WO9523225-A2.
CX
PD 31-AUG-1995.
CX
PF 23-FEB-1995; 95WO-IB00156.
CX
PR 30-JAN-1995; 95US-0380734.
PR 23-FEB-1994; 94US-0201109.
PR 29-MAR-1994; 94US-0218934.
PR 04-APR-1994; 94US-0222795.
PR 07-APR-1994; 94US-0224483.
PR 15-APR-1994; 94US-0227958.
PR 15-APR-1994; 94US-0228041.
PR 18-MAY-1994; 94US-0245736.
PR 06-JUL-1994; 94US-0271280.
PR 15-AUG-1994; 94US-0291932.
PR 16-AUG-1994; 94US-0291433.
PR 17-AUG-1994; 94US-0292620.
PR 19-AUG-1994; 94US-0293520.
PR 02-SEP-1994; 94US-0300000.
PR 08-SEP-1994; 94US-0303039.
PR 23-SEP-1994; 94US-0311486.
PR 23-SEP-1994; 94US-0311749.
PR 28-SEP-1994; 94US-0314397.
PR 03-OCT-1994; 94US-0316771.
PR 07-OCT-1994; 94US-0319492.
PR 11-OCT-1994; 94US-0321993.
PR 04-NOV-1994; 94US-0334847.
PR 10-NOV-1994; 94US-0337608.
PR 28-NOV-1994; 94US-0345516.
PR 16-DEC-1994; 94US-0357577.
PR 23-DEC-1994; 94US-0363233.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Stinchcomb DT, Chowrira B, Direnzo A, Draper KG, Dudycz LW;
PI Grimm S, Karpeisky A, Kisich K, Matulic-adamic J, Mcswiggen JA;
PI Modak A, Pavco P, Beigleman L, Sullivan SM, Sweedler D;
PI Thompson JD, Tracz D, Usman N, Wincott FE, Woolf T;
XX
DR WPI; 1995-351090/45.
XX
PT Ribozymes having modified bases and methods for producing them -
PT for use in inhibiting disease related genes
XX
PS Claim 2; Page 252; 407pp; English.
XX
CC The present sequence represents a preferred target sequence for an
CC enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
CC mRNA at the nucleotide base position indicated in the DE line.
CC Regions of the mRNA that do not form secondary folding
CC structures and that contain potential hammerhead and hairpin
CC ribozyme cleavage sites were identified by computer analysis.
CC Ribozymes directed against these mRNA sequences were designed and
CC synthesised with modifications that improve their nuclease
CC resistance. The ribozymes are designed to cleave the target
CC sequences and thereby inhibit TNF-alpha expression, making them
CC potentially useful for treating rheumatoid arthritis, septic shock
CC and other inflammatory disorders including psoriasis, as well as
CC for treatment of AIDS.
CC (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ Sequence 15 BP; 5 A; 0 C; 0 G; 10 U; 0 other;

Query Match 0.9%; Score 11.8; DB 1; Length 15;
Best Local Similarity 86.7%; Pred. No. 5.9e+02;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1251 TAAACAACAAATAAT 1265
||||.||.|||||||
Db 15 TAAATAATAAATAAT 1

RESULT 879
AAT55794/c
ID AAT55794 standard; RNA; 15 BP.
XX
AC AAT55794;
XX
DT 25-MAR-2003 (updated)
DT 25-MAR-1997 (first entry)
XX
DE Human TNF-alpha hammerhead ribozyme target sequence (nt position 1256).
XX
KW Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;

gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
intercellular adhesion molecule; rel A; tumour necrosis factor;
TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
translocation; chronic myelogenous leukaemia; CML; cancer;
Philadelphia chromosome; inflammation; autoimmune disease;
atherosclerosis; myocardial infarction; stroke; restenosis;
transplant rejection; rheumatoid arthritis; psoriasis;
myocardial ischaemia; Kawasaki disease; septic shock; HIV;
human immunodeficiency virus; acquired immune deficiency syndrome;
AIDS; ss.

Homo sapiens.

WO9523225-A2.

31-AUG-1995.

23-FEB-1995; 95WO-IB00156.

30-JAN-1995; 95US-0380734.
23-FEB-1994; 94US-0201109.
29-MAR-1994; 94US-0218934.
04-APR-1994; 94US-0222795.
07-APR-1994; 94US-0224483.
15-APR-1994; 94US-0227958.
15-APR-1994; 94US-0228041.
18-MAY-1994; 94US-0245736.
06-JUL-1994; 94US-0271280.
15-AUG-1994; 94US-0291932.
16-AUG-1994; 94US-0291433.
17-AUG-1994; 94US-0292620.
19-AUG-1994; 94US-0293520.
02-SEP-1994; 94US-0300000.
08-SEP-1994; 94US-0303039.
23-SEP-1994; 94US-0311486.
23-SEP-1994; 94US-0311749.
28-SEP-1994; 94US-0314397.
03-OCT-1994; 94US-0316771.
07-OCT-1994; 94US-0319492.
11-OCT-1994; 94US-0321993.
04-NOV-1994; 94US-0334847.
10-NOV-1994; 94US-0337608.
28-NOV-1994; 94US-0345516.
16-DEC-1994; 94US-0357577.
23-DEC-1994; 94US-0363233.

(RIBO-) RIBOZYME PHARM INC.

Stinchcomb DT, Chowrira B, Direnzo A, Draper KG, Dudycz LW;
Grimm S, Karpeisky A, Kisich K, Matulic-adamic J, Mcswiggen JA;
Modak A, Pavco P, Beigleman L, Sullivan SM, Sweedler D;
Thompson JD, Tracz D, Usman N, Wincott FE, Woolf T;

WPI; 1995-351090/45.

Ribozymes having modified bases and methods for producing them -
for use in inhibiting disease related genes

Claim 2; Page 242; 407pp; English.

The present sequence represents a preferred target sequence for an
enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
mRNA at the nucleotide base position indicated in the DE line.
Regions of the mRNA that do not form secondary folding
structures and that contain potential hammerhead and hairpin
ribozyme cleavage sites were identified by computer analysis.
Ribozymes directed against these mRNA sequences were designed and
synthesised with modifications that improve their nuclease
resistance. The ribozymes are designed to cleave the target
sequences and thereby inhibit TNF-alpha expression, making them
potentially useful for treating rheumatoid arthritis, septic shock
and other inflammatory disorders including psoriasis, as well as
for treatment of AIDS.

CC (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ Sequence 15 BP; 5 A; 0 C; 0 G; 10 U; 0 other;

Query Match 0.9%; Score 11.8; DB 1; Length 15;
Best Local Similarity 86.7%; Pred. No. 5.9e+02;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1251 TAAACAACAAATAAT 1265
|||| || |||||||
Db 15 TAAATAATAAATAAT 1

RESULT 880
AAQ92084/c
ID AAQ92084 standard; cDNA; 17 BP.
XX
AC AAQ92084;
XX
DT 25-MAR-2003 (updated)
DT 07-JAN-1996 (first entry)
XX
DE Renilla reniformis luciferase DNA probe-1.
XX
KW Luciferase; enzyme; bioluminescence; luminescence; label; DNA probe;
KW antibody; oligonucleotide; ss.
XX
OS Synthetic.
XX
PN US5418155-A.
XX
PD 23-MAY-1995.
XX
PF 14-DEC-1993; 93US-0167650.
XX
PR 29-DEC-1989; 89US-0458952.
PR 20-AUG-1992; 92US-0933017.
PR 17-JUN-1993; 93US-0079700.
PR 14-DEC-1993; 93US-0167650.
XX
PA (UYGE-) UNIV GEORGIA RES FOUND INC.
XX
PI Cormier MJ, Lorenz WW;
XX
DR WPI; 1995-199741/26.
XX
PT New recombinant Renilla luciferase polypeptide - used as a
PT luminescent tag, partic in bio-luminescence assays and for the prodn
PT of antibodies
XX
PS Disclosure; Fig. 4; 18pp; English.
XX
CC This 17-mer oligonucleotide DNA probe, along with Probe-2 (AAQ92085)
CC are used to screen an R. reniformis cDNA library to isolate cDNA
CC encoding Renilla luciferase. The luciferase was then expressed
CC using E. coli.
CC (Updated on 25-MAR-2003 to correct PF field.)
CC (Updated on 25-MAR-2003 to correct DR field.)
XX
SQ Sequence 17 BP; 6 A; 0 C; 2 G; 9 T; 0 other;

Query Match 0.9%; Score 11.8; DB 1; Length 17;
Best Local Similarity 86.7%; Pred. No. 6.5e+02;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1005 ACATAAATTATTTTC 1019
| | ||||||||||||
Db 15 AAAAAAATTATTTTC 1

RESULT 881
AAF02054
ID AAF02054 standard; DNA; 17 BP.

```
CX
AC   AAF02054;
CX
DT   16-FEB-2001  (first entry)
CX
DE   Hammerhead ribozyme substrate #349.
CX
KW   Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW   interferon alpha; ss.
XX
OS   Homo sapiens.
XX
PN   WO200061729-A2.
XX
PD   19-OCT-2000.
XX
PF   11-APR-2000; 2000WO-US09721.
XX
PR   12-APR-1999;   99US-0129390.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Blatt L,  Zwick M,  Pavco P,  McSwiggen J;
XX
DR   WPI; 2000-647423/62.
XX
PT   Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT   useful for producing e.g. granulocyte colony stimulating factor
PT   protein, interferon alpha and erythropoietin -
XX
PS   Claim 37; Page 63; 164pp; English.
XX
CC   The present invention relates to enzymatic and antisense nucleic acid
CC   molecules that act as inhibitors of the expression of repressor genes
CC   encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC   transcription factor gene, IRF-2 and/or the CAATT Displacement
CC   Protein (CDP). Inhibition of the repressors removes prevents
CC   inhibition (and consequently increases expression of) genes involved in
CC   the production of erythropoietin, granulocyte colony stimulating factor
CC   protein and interferon alpha.
XX
SQ   Sequence 17 BP; 7 A; 1 C; 1 G; 8 T; 0 other;

  Query Match             0.9%;  Score 11.8;  DB 1;  Length 17;
  Best Local Similarity   86.7%;  Pred. No. 6.5e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1004 AACATAAATTATTTT 1018
              || |||| |||||||
Db          1 AAAATAATTTATTTT 15


RESULT 882
ABT39376/c
ID   ABT39376 standard; DNA; 17 BP.
XX
AC   ABT39376;
XX
DT   12-JUN-2003  (first entry)
XX
DE   Tumour suppression related human fukutin oligo SEQ ID No 5013.
XX
KW   Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW   antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW   schizophrenia; protein chip; gene therapy; tumour suppression;
KW   human fukutin; ds.
XX
OS   Homo sapiens.
XX
PN   WO2003025175-A2.
XX
PD   27-MAR-2003.
XX
PF   17-SEP-2002; 2002WO-IB04208.
XX
PR   17-SEP-2001; 2001FR-0011978.
XX
PA   (MOLE-) MOLECULAR ENGINES LAB.
XX
PI   Telerman A,  Amson R,  Tuijnder M;
XX
DR   WPI; 2003-313353/30.
XX
PT   New isolated nucleic acid, useful for treating viral diseases
PT   associated with tumors and cell degeneration, also related
PT   polypeptides, antibodies and transfected cells  -
XX
PS   Disclosure; Page 620; 720pp; French.
XX
CC   The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC   given in the specification, a sequence containing at least 15
CC   consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC   optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC   sequence that hybridizes to them under highly stringent conditions, or
CC   the complement of any of them, or the corresponding RNA. The novel
CC   isolated nucleic acids of the invention are useful as probes and primers
CC   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC   and for production of recombinant polypeptides. Any of the nucleic acids,
CC   polypeptides, vectors containing the nucleic acids, cells containing the
CC   vector or antibodies directed against the polypeptides are useful for
CC   preparation of pharmaceuticals for prevention and/or treatment of viral
CC   diseases that are characterised by development of tumours or cell
CC   degeneration, specifically cancer but also Alzheimer's disease and
CC   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC   patient samples is useful for diagnosis and/or prognosis of these
CC   diseases. The polypeptides can also be used to generate antibodies, and
CC   both the polypeptide and antibodies are useful as components of protein
CC   chips. The nucleic acid sequences of the invention can be used in gene
CC   therapy. This polynucleotide sequence represents a tumour suppression
CC   related human fukutin oligonucleotide of the invention.
XX
SQ   Sequence 17 BP; 9 A; 4 C; 1 G; 3 T; 0 other;

  Query Match             0.9%;  Score 11.8;  DB 1;  Length 17;
  Best Local Similarity   86.7%;  Pred. No. 6.5e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1286 TTGTTTATCTGAAAT 1300
              ||||||| ||| ||
Db         16 TTGTTTATTTGAGAT 2


RESULT 883
ABZ60265
ID   ABZ60265 standard; RNA; 17 BP.
XX
AC   ABZ60265;
XX
DT   21-MAR-2003  (first entry)
XX
DE   Human K-Ras DNAzyme substrate #377.
XX
KW   Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW   enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW   anti-rheumatic; cancer; AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO200297114-A2.
XX
PD   05-DEC-2002.
XX
PF   29-MAY-2002; 2002WO-US16840.
XX
PR   29-MAY-2001; 2001US-294140P.
```

RR 06-JUN-2001; 2001US-296249P.
RR 10-SEP-2001; 2001US-318471P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
IN Mcswiggen J;
XX
RI WPI; 2003-140484/13.
XX
TI Novel short interfering RNA and enzymatic nucleic acid useful for
TI treating cancer, modulates the expression of a nucleic acid encoding
TI HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -
XX
PS Claim 58; Page 92; 185pp; English.
XX
CC The invention relates to a novel short interfering RNA (siRNA) nucleic
CC acid molecule or an enzymatic nucleic acid molecule, that modulates
CC expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC acid molecule of the invention has cytostatic, anti-HIV, and
CC anti-rheumatic activity. The nucleic acid molecules are useful for
CC reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic
CC acids are also useful for treating breast, ovarian, colorectal, lung,
CC prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS.
CC The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531,
CC ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target
CC sequences for the human ribozymes of the invention.
XX
SQ Sequence 17 BP; 7 A; 0 C; 3 G; 7 U; 0 other;

```
Query Match              0.9%;  Score 11.8;  DB 1;  Length 17;
Best Local Similarity   46.7%;  Pred. No. 6.5e+02;
Matches    7;  Conservative    6;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1615 TTAAAATATAATTTG 1629
             ::|||| |: |:::|
Db          2 UUAAAAGAUUAUUUG 16
```

RESULT 884
AAF05526/c
ID AAF05526 standard; DNA; 17 BP.
XX
AC AAF05526;
XX
DT 16-FEB-2001 (first entry)
XX
DE Hammerhead ribozyme substrate #2745.
XX
KW Ribozyme; erythropoietin; granulocyte colony stimulating factor;
KW interferon alpha; ss.
XX
OS Homo sapiens.
XX
PN WO200061729-A2.
XX
PD 19-OCT-2000.
XX
PF 11-APR-2000; 2000WO-US09721.
XX
PR 12-APR-1999; 99US-0129390.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Blatt L, Zwick M, Pavco P, McSwiggen J;
XX
DR WPI; 2000-647423/62.
XX
PT Enzymatic and antisense nucleic acid inhibition of repressor genes,
PT useful for producing e.g. granulocyte colony stimulating factor
PT protein, interferon alpha and erythropoietin -
XX
PS Claim 18; Page 118; 164pp; English.
XX
CC The present invention relates to enzymatic and antisense nucleic acid
CC molecules that act as inhibitors of the expression of repressor genes
CC encoding the TR2 Orphan receptor, EAR3/COUP-TF-1, the GATA
CC transcription factor gene, IRF-2 and/or the CAATT Displacement
CC Protein (CDP). Inhibition of the repressors removes prevents
CC inhibition (and consequently increases expression of) genes involved in
CC the production of erythropoietin, granulocyte colony stimulating factor
CC protein and interferon alpha.
XX
SQ Sequence 17 BP; 6 A; 1 C; 1 G; 9 T; 0 other;

```
Query Match              0.9%;  Score 11.8;  DB 1;  Length 17;
Best Local Similarity   86.7%;  Pred. No. 6.5e+02;
Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1002 ATAACATAAATTATT 1016
              ||| || ||||||||
Db         17 ATATCAAAAATTATT 3
```

RESULT 885
ABZ10595/c
ID ABZ10595 standard; DNA; 18 BP.
XX
AC ABZ10595;
XX
DT 16-JAN-2003 (first entry)
XX
DE Haematopoietic cell proliferation disorder related oligonucleotide #735.
XX
KW Human; haematopoietic cell proliferation disorder; cytostatic;
KW gene therapy; lymphocytic leukaemia; acute myelogenous leukaemia;
KW cytosine methylation state; probe; primer; ss.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO200277272-A2.
XX
PD 03-OCT-2002.
XX
PF 26-MAR-2002; 2002WO-EP03401.
XX
PR 26-MAR-2001; 2001US-278333P.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Berlin K, Braun A, Distler J, Guetig D, Howe A, Mueller J;
PI Olek A, Piepenbrock C, Adorjan P, Grabs G, Lesche R, Leu B;
PI Lewin A, Lipscher E, Maier S, Model F, Mueller V, Otto T;
PI Pelet C, Schwope I, Ziebarth H;
XX
DR WPI; 2003-018942/01.
XX
PT Detecting and differentiating between hematopoietic cell proliferative
PT disorders, comprises contacting a target nucleic acid with a reagent
PT that distinguishes between methylated and non-methylated CpG
PT dinucleotides -
XX
PS Claim 15; Page 52; 117pp; English.
XX
CC The present invention describes a method for detecting and
CC differentiating between haematopoietic cell proliferative disorders
CC associated with at least 1 gene and/or their regulatory regions in a
CC subject. The method comprises contacting a target nucleic acid in a
CC biological sample obtained from the subject with at least 1 reagent,
CC which distinguishes between methylated and non-methylated CpG
CC dinucleotides within the target nucleic acid. ABZ09861 to ABZ11118
CC represent specifically claimed nucleotide sequences from the present
CC invention. Oligonucleotides from the present invention can be used: for
CC differentiating between healthy haematopoietic cells and proliferative
CC disorder haematopoietic cells; for differentiating between acute

CC lymphocytic leukaemia and acute myelogenous leukaemia; as probes for
CC determining the cytosine methylation state and/or single nucleotide
CC polymorphisms (SNPs) of haematopoietic cell proliferation disorder
CC related sequences and their complements; and as primers for the
CC amplification of haematopoietic cell proliferation disorder related
CC DNA sequences. The nucleotide sequences from the present invention can
CC also be used for detecting a predisposition to, differentiation between
CC subclasses, diagnosis, prognosis, treatment and/or monitoring of
CC haematopoietic cell proliferative disorders. The present method enables
CC a highly specific classification of haematopoietic cell proliferative
CC disorders allowing for improved and informed treatment of patients.
XX
SQ Sequence 18 BP; 3 A; 1 C; 4 G; 10 T; 0 other;

Query Match 0.9%; Score 11.8; DB 1; Length 18;
Best Local Similarity 86.7%; Pred. No. 6.7e+02;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1243 ATTTCAGATAAACAA 1257
||||| || ||||||
Db 15 ATTTCCGAAAAACAA 1

RESULT 886
AAV82030
ID AAV82030 standard; DNA; 18 BP.
XX
AC AAV82030;
XX
DT 21-JUN-1999 (first entry)
XX
DE Moraxella lactoferrin binding protein 1 (Lbp1) PCR primer.
XX
KW Lactoferrin receptor; lactoferrin binding protein; Lbp1;
KW lbpA gene; infection; otitis media; sinusitis; conjunctivitis;
KW pneumonia; bronchitis; tracheitis; emphysema; diagnosis; therapy;
KW vaccine; Branhamella catarrhalis; PCR; primer; ss.
XX
OS Synthetic.
OS Moraxella catarrhalis.
XX
PN WO9855606-A2.
XX
PD 10-DEC-1998.
XX
PF 02-JUN-1998; 98WO-CA00544.
XX
PR 08-MAY-1998; 98US-0074658.
PR 03-JUN-1997; 97US-0867941.
XX
PA (CONN-) CONNAUGHT LAB LTD.
XX
PI Du R, Klein MH, Loosmore SM, Wang Q, Yang Y;
XX
DR WPI; 1999-070266/06.
XX
PT Lactoferrin receptor genes from Moraxella, especially M. catarrhalis
PT - useful to diagnose Moraxella infection e.g. to detect otitis media
PT due to M. catarrhalis infection and to immunise against such
PT infections
XX
PS Example 1; Page 37; 202pp; English.
XX
CC This PCR primer is based on a C-terminal peptide (see AAW89423) of
CC Moraxella catarrhalis lactoferrin binding protein 1 (Lbp1). PCR
CC primers (see AAV82030-31) based on this C-terminal peptide and other
CC primers (see AAV82022-29) based on an isolated N-terminal peptide,
CC are used in the amplification of M. catarrhalis lbpA genes that
CC code for Lbp1. The invention provides immunogenic compositions,
CC including vaccines, based upon expressed recombinant Lbp1 and/or
CC Lbp2 and/or ORF3 proteins (see AAW89413-21) for use in the prevention
CC of diseases (e.g. otitis media) caused by Moraxella. The genes and
CC DNA sequences of the Moraxella lactoferrin receptor (lfr) locus
CC (see AAV82019-21) are useful for diagnosis, immunisation, and the
CC generation of diagnostic and immunological reagents.
XX
SQ Sequence 18 BP; 7 A; 1 C; 3 G; 7 T; 0 other;

Query Match 0.9%; Score 11.8; DB 1; Length 18;
Best Local Similarity 86.7%; Pred. No. 6.7e+02;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1161 TTAAATGATGTTTTA 1175
| |||||| ||||||
Db 3 TGAAATGAAGTTTTA 17

RESULT 887
AAV82031/c
ID AAV82031 standard; DNA; 18 BP.
XX
AC AAV82031;
XX
DT 21-JUN-1999 (first entry)
XX
DE Moraxella lactoferrin binding protein 1 (Lbp1) PCR primer.
XX
KW Lactoferrin receptor; lactoferrin binding protein; Lbp1;
KW lbpA gene; infection; otitis media; sinusitis; conjunctivitis;
KW pneumonia; bronchitis; tracheitis; emphysema; diagnosis; therapy;
KW vaccine; Branhamella catarrhalis; PCR; primer; ss.
XX
OS Synthetic.
OS Moraxella catarrhalis.
XX
PN WO9855606-A2.
XX
PD 10-DEC-1998.
XX
PF 02-JUN-1998; 98WO-CA00544.
XX
PR 08-MAY-1998; 98US-0074658.
PR 03-JUN-1997; 97US-0867941.
XX
PA (CONN-) CONNAUGHT LAB LTD.
XX
PI Du R, Klein MH, Loosmore SM, Wang Q, Yang Y;
XX
DR WPI; 1999-070266/06.
XX
PT Lactoferrin receptor genes from Moraxella, especially M. catarrhalis
PT - useful to diagnose Moraxella infection e.g. to detect otitis media
PT due to M. catarrhalis infection and to immunise against such
PT infections
XX
PS Example 1; Page 37; 202pp; English.
XX
CC This PCR primer is based on a C-terminal peptide (see AAW89423) of
CC Moraxella catarrhalis lactoferrin binding protein 1 (Lbp1). PCR
CC primers (see AAV82030-31) based on this C-terminal peptide and other
CC primers (see AAV82022-29) based on an isolated N-terminal peptide,
CC are used in the amplification of M. catarrhalis lbpA genes that
CC code for Lbp1. The invention provides immunogenic compositions,
CC including vaccines, based upon expressed recombinant Lbp1 and/or
CC Lbp2 and/or ORF3 proteins (see AAW89413-21) for use in the prevention
CC of diseases (e.g. otitis media) caused by Moraxella. The genes and
CC DNA sequences of the Moraxella lactoferrin receptor (lfr) locus
CC (see AAV82019-21) are useful for diagnosis, immunisation, and the
CC generation of diagnostic and immunological reagents.
XX
SQ Sequence 18 BP; 7 A; 3 C; 1 G; 7 T; 0 other;

Query Match 0.9%; Score 11.8; DB 1; Length 18;
Best Local Similarity 86.7%; Pred. No. 6.7e+02;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Y       1161 TTAAATGATGTTTTA 1175
             | |||||| ||||||
D         16 TGAAATGAAGTTTTA 2
```

ESULT 888
AH56758
AAH56758 standard; DNA; 19 BP.

AAH56758;

06-SEP-2001 (first entry)

S. aureus groE operon antisense oligonucleotide SEQ ID NO:406.

Antisense oligonucleotide; groE; groEL; groES; inhibitor; growth; microorganism; Escherichia coli; Streptococcus pneumoniae; diagnosis; Streptococcus pyogenes; Staphylococcus aureus; Pseudomonas aeruginosa; antibacterial; antiviral; antiproliferative; antisense therapy; microbial infection; ss.

Staphylococcus aureus.

WO200136625-A2.

25-MAY-2001.

20-NOV-2000; 2000WO-CA01347.

18-NOV-1999; 99US-0166249.

(GENE-) GENESENSE TECHNOLOGIES INC.

Wright JA, Young AH, Dugourd D;

WPI; 2001-355633/37.

Novel antisense compounds targeting nucleic acid encoding groEL or groES gene of microorganism, which hybridize with and inhibit expression of the genes, useful to inhibit growth of microorganism having the genes -

Claim 3; Page 52; 110pp; English.

The present invention specifically claims AAH56368 to AAH56832 which are antisense oligonucleotides to nucleotide sequences encoding groE. More generally, antisense compounds (I) comprising antisense oligonucleotides of 5-50 bases targeted to a nucleotide sequence encoding groEL (heat shock protein (HSP)60) (GL) and groES (HSP10) (GS) gene from a microorganism, where the antisense compound is complementary to GL or GS of a microorganism and specifically hybridises with and inhibits the expression of GL or GS, is claimed. (I) have antibacterial, antiviral and antiproliferative activities, and can be used in antisense therapy and for inhibition of expression of groES or groEL. (I) are useful for inhibiting expression of GL or GS in cells or tissues in vitro. (I) are also useful for inhibiting the growth of a microorganism, or inhibiting the expression of GL or GS gene in a microorganism (a bacterial cell or a virus) having a GL or GS gene which involves administering to the microorganism or to a cell infected with the microorganism, (I). (I) are also useful for treating a mammalian pathological condition mediated by the microorganisms which involves identifying a eukaryotic organism having a pathological condition mediated by microorganisms having a GL or GS gene and administering (I) such that the growth of microorganism is inhibited. The antisense compounds are utilised for diagnostics, therapeutics, prophylaxis and as research reagents and kits, e.g., to prevent or delay microbial infections in humans. They are also useful as molecular weight markers. AAH56362 to AAH56367 and AAH56833 to AAH56854 represent PCR primers for groE sequences which are used in the exemplification of the present invention. AAH56855 to AAH56870 represent groE nucleotide sequence given in the present invention.

Sequence 19 BP; 6 A; 1 C; 0 G; 12 T; 0 other;

```
  Query Match             0.9%;  Score 11.8;  DB 1;  Length 19;
  Best Local Similarity   86.7%;  Pred. No. 7e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1139 TAAATTTATTTTATT 1153
              ||| |||||| |||||
Db          4 TAATTTTATATTATT 18
```

RESULT 889
AAH76783
ID AAH76783 standard; DNA; 24 BP.
XX
AC AAH76783;
XX
DT 14-DEC-2001 (first entry)
XX
DE Human nuclear transforming protein 13 RT-PCR primer, SEQ ID NO:4.
XX
KW Human; nuclear transforming protein 13; ATP/GTP binding domain;
KW recombinant production; malignant tumour; cancer; blood disease;
KW HIV infection; human immunodeficiency virus; immune disorder;
KW inflammatory condition; cytostatic; anti-HIV; antiinflammatory;
KW immunomodulator; reverse transcription-PCR; RT-PCR primer; ss.
XX
OS Homo sapiens.
XX
PN WO200172800-A1.
XX
PD 04-OCT-2001.
XX
PF 26-MAR-2001; 2001WO-CN00437.
XX
PR 27-MAR-2000; 2000CN-0115183.
XX
PA (SHAN-) SHANGHAI BIOWINDOW GENE DEV INC.
XX
PI Mao Y, Xie Y;
XX
DR WPI; 2001-597103/67.
XX
PT Human nuclear transforming protein 13 containing ATP/GTP binding domain
PT and encoded polynucleotide, applicable in diagnosis and treatment of
PT malignant neoplasm, hemopathy, HIV infection, immunological diseases
PT and inflammations -
XX
PS Example 2; Page 18; 37pp; Chinese.
XX
CC The invention relates to human nuclear transforming protein 13
CC (AAG66744), nucleic acids encoding it (AAH76781), and a method for the
CC recombinant production of nuclear transforming protein 13. The protein
CC contains an ATP/GTP binding domain and has a molecular weight of 13 kD.
CC The present invention additionally discloses an antagonist of nuclear
CC transforming protein 13 for therapeutic use, and an antibody which
CC specifically binds to human nuclear transforming protein 13. Nuclear
CC transforming protein 13, and nucleotides which encode it may be used
CC for treating a variety of diseases, such as malignant tumours, blood
CC diseases, HIV (human immunodeficiency virus) infection, immune disorders
CC and inflammatory conditions. The protein may also be used to screen for
CC modulators of its activity or for peptide fingerprinting identification.
CC The polynucleotide can be used as a primer for nucleic acid amplification
CC reactions or as a probe for hybridisation reactions, or in producing gene
CC chips or microarrays. Sequences AAH76782-AAH76783 represent reverse
CC transcription-PCR (RT-PCR) primers used in an exemplification of the
CC invention to isolate human nuclear transforming protein 13 cDNA.
XX
SQ Sequence 24 BP; 6 A; 4 C; 1 G; 13 T; 0 other;

```
  Query Match             0.9%;  Score 11.8;  DB 1;  Length 24;
  Best Local Similarity   69.6%;  Pred. No. 7.6e+02;
  Matches   16;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1133 TTATAGTAAATTTATTTTATTTT 1155
```

```
                 || | | | |  |||||||||| |
b          1 TTCTTGCACAAATATTTTATTCT 23


ESULT 890
AH45430/c
D   AAH45430 standard; DNA; 25 BP.
K
C   AAH45430;
K
T   06-SEP-2001  (first entry)
K
E   Glutamate tRNA synthetase 58 cDNA specific PCR primer.
X
W   Human; glutamate tRNA synthetase 58; malignant tumour; haemopathy;
W   HIV infection; immunological disease; inflammatory condition; cytostatic;
W   haemostatic; virucide; immunomodulatory; antiinflammatory;
W   PCR primer; ss.
X
S   Homo sapiens.
X
N   WO200138371-A1.
X
D   31-MAY-2001.
X
F   20-NOV-2000; 2000WO-CN00475.
X
R   24-NOV-1999;   99CN-0124102.
X
A   (BIOR-) BIOROAD GENE DEV LTD SHANGHAI.
X
I   Mao Y,  Xie Y;
X
R   WPI; 2001-355891/37.
X
T   New human glutamate tRNA synthase 58 for diagnosing and treating
T   cancer, hemopathy, human immunodeficiency virus (HIV) infection,
T   immunological diseases and inflammation -
X
S   Example 3; Page 12; 36pp; Chinese.
X
C   This invention relates to human glutamate tRNA synthetase 58, and the
C   cDNA sequence encoding it. The invention includes a vector containing the
C   cDNA sequence, a host cell transformed with the vector, and an antibody
C   targetting the glutamate tRNA synthetase 58 protein. The glutamate tRNA
C   synthetase 58 protein and cDNA may be used in the diagnosis and treatment
C   of malignant tumours, haemopathy; human immunodeficiency virus (HIV)
C   infection, immunological diseases and various inflammatory conditions.
C   Use of the protein or cDNA for treatment, may result in cytostatic;
C   haemostatic; virucide; immunomodulatory; or antiinflammatory activity.
C   The present sequence represents a PCR primer specific for cDNA encoding
C   human glutamate tRNA synthetase 58.
X
SQ  Sequence 25 BP; 5 A; 1 C; 0 G; 19 T; 0 other;

  Query Match             0.9%;  Score 11.8;  DB 1;  Length 25;
  Best Local Similarity   69.6%;  Pred. No. 7.7e+02;
  Matches   16;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1604 ATATGAAACATTTAAAATATAAT 1626
              | || ||  |  |||||| |||
Db         25 AAATAAATAAAATAAAATAAAAT 3


RESULT 891
AAL51650/c
ID   AAL51650 standard; DNA; 38 BP.
XX
AC   AAL51650;
XX
DT   17-APR-2003  (first entry)
XX
DE   Interleukin 8 capture probe.
XX
KW   Probe; ss; messenger RNA amplification; capture probe;
KW   rolling circle replication; nucleic acid detection; disease detection;
KW   mutation detection; gene expression profiling; RNA expression profiling;
KW   gene discovery; gene mapping; agricultural research; virus detection;
KW   cancer; cystic fibrosis; muscular dystrophy; diabetes; haemophilia;
KW   sickle cell anaemia.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1
FT                   /*tag=  a
FT                   /mod_base= OTHER
FT                   /note= "Modified with NH2-C12"
XX
PN   WO2003008538-A2.
XX
PD   30-JAN-2003.
XX
PF   10-MAY-2002; 2002WO-US15045.
XX
PR   20-JUL-2001; 2001US-0910383.
XX
PA   (MOLE-) MOLECULAR STAGING INC.
XX
PI   Nallur GN,  Luo C,  Chowdhury K,  Pinard R;
XX
DR   WPI; 2003-221847/21.
XX
PT   Amplifying messenger RNA for manipulating and detecting nucleic acid,
PT   disease and mutation detection, gene or RNA expression profiling and
PT   gene discovery, comprises associating a rolling circle replication
PT   primer with a cDNA strand -
XX
PS   Example 3; Page 69; 103pp; English.
XX
CC   The invention comprises a method for amplifying messenger RNA (mRNA). The
CC   method involves: mixing reverse transcription (RT) primers with a nucleic
CC   acid sample and reverse transcribing to produce cDNA strands; mixing the
CC   strands with capture probes, then with rolling circle replication
CC   primers; mixing amplification target circles with the primers; and
CC   incubating the circles to promote replication of the target circles - to
CC   form tandem sequence DNA. The method of the invention is useful for
CC   amplifying mRNA. The method is useful for manipulating and detecting
CC   nucleic acids, disease and mutation detection, gene or RNA expression
CC   profiling, gene discovery, gene mapping, agricultural research and virus
CC   detection. Disorders which can be diagnosed by the method of the
CC   invention include: cancer; cystic fibrosis; muscular dystrophy; diabetes;
CC   haemophilia; sickle cell anaemia. The present DNA sequence represents a
CC   capture probe used in an example of the invention.
XX
SQ   Sequence 38 BP; 25 A; 1 C; 5 G; 7 T; 0 other;

  Query Match             0.9%;  Score 11.8;  DB 1;  Length 38;
  Best Local Similarity   61.3%;  Pred. No. 6.9e+02;
  Matches   19;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy       1025 TAACTTATTAACCTATTTATTATTTATGTAT 1055
              | | | ||| | ||  || || ||| | | |
Db         31 TCAATGATTCATCTTCTTTTTTTTTTTTTTT 1


RESULT 892
AAA86606
ID   AAA86606 standard; DNA; 18 BP.
XX
AC   AAA86606;
XX
DT   04-DEC-2000  (first entry)
XX
DE   Cdc 2 kinase hammerhead ribozyme recognitoin site #37.
XX
```

Ribozyme; hairpin; hammerhead; gene therapy; vasotropic; restenosis; ss.

Mammalia.

WO200032765-A2.

08-JUN-2000.

06-DEC-1999; 99WO-US28772.

04-DEC-1998; 98US-0110954.

(IMMU-) IMMUSOL INC.

Tritz R, Welch PJ, Barber JR, Robbins JM;

WPI; 2000-412314/35.

New hairpin and hammerhead ribozyme for inhibiting restenosis, cleaves RNA encoding a cyclin or cell-cycle dependent kinase other than CDK1, PCNA and Cyclin B1 -

Example 1; Page 18; 109pp; English.

The present invention relates to a hairpin or hammerhead ribozyme, designed to cleave RNA encoding a cyclin or cell-cycle dependent kinase other than cell-cycle dependent kinases CDK1, PCNA and Cyclin B1. Representative examples of ribozyme recognition sites are given in AAA82415 to AAA86787. The ribozyme of the invention is useful for inhibiting restenosis by introduction of the ribozyme into cells. The ribozyme is resistant to endonuclease activity and hence is efficient in restenosis treatment.

Sequence 18 BP; 7 A; 2 C; 2 G; 7 T; 0 other;

```
Query Match             0.9%;  Score 11.6;  DB 1;  Length 18;
Best Local Similarity   77.8%;  Pred. No. 7.3e+02;
Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

        830 GGATTTTTTTCTGTTAAA 847
            ||| ||| ||| |||||
          1 GGAAATTTCTCTATTAAA 18
```

SULT 893
H61772
AAH61772 standard; DNA; 18 BP.

AAH61772;

10-SEP-2001 (first entry)

Cdc 2 kinase hammerhead ribozyme recognition site SEQ ID NO:4196.

Human; ribozyme therapy; hairpin ribozyme; hammerhead ribozyme; recognition site; target; ribozyme binding site; eye disease; vulnerary; proliferative disease; skin disease; psoriasis; diabetic retinopathy; cytokine; inflammation; cell-cycle dependent kinase; cyclin; MMP; matrix metalloproteinase; growth factor; reductase; scarring; cytostatic; antipsoriatic; dermatological; antiseborrheic; antidiabetic; virucide; antisickling; ophthalmological; keratolytic; gene therapy; viral wart; atopic dermatitis; actinic keratosis; squamous cell carcinoma; basal cell carcinoma; seborrheic wart; vitreoretinopathy; scar; sickle cell retinopathy; ss.

Homo sapiens.
Synthetic.

WO200130362-A2.

03-MAY-2001.

PF 26-OCT-2000; 2000WO-US29500.
XX
PR 26-OCT-1999; 99US-0161532.
XX
PA (IMMU-) IMMUSOL INC.
XX
PI Robbins JM, Tritz R;
XX
DR WPI; 2001-300427/31.
XX
PT Treating proliferative skin or eye diseases and scarring, using
PT ribozymes that cleave RNA encoding cytokines involved in inflammation,
PT matrix metalloproteinases, growth factors and cell-cycle dependent
PT kinases -
XX
PS Disclosure; Page 378; 408pp; English.
XX
CC The present invention describes a method for treating a proliferative
CC skin or eye disease and scarring. The method involves administering a
CC ribozyme (I) which cleaves RNA encoding a cytokine involved in
CC inflammation, matrix metalloproteinase (MMP), cyclin, cell-cycle
CC dependent kinase, growth factor or a reductase, or administering a
CC nucleic acid molecule (II) comprising a promoter operably linked to a
CC nucleic acid segment encoding (I). (I) can have antipsoriatic,
CC dermatological, cytostatic, antiseborrheic, antidiabetic, antisickling,
CC ophthalmological, vulnerary, keratolytic and virucide activities, and
CC cleaves RNA encoding cytokine involved in inflammation. (I) can be used
CC in gene therapy. (I) and (II) are useful for treating proliferative
CC skin diseases such as psoriasis, atopic dermatitis, actinic keratosis,
CC squamous or basal cell carcinoma and viral or seborrheic wart. They can
CC also be used for treating proliferative eye diseases such as diabetic
CC retinopathy, vitreoretinopathy, sickle cell retinopathy, retinopathy of
CC prematurity and retinal detachment, and for treating and preventing
CC scarring such as keloid, adhesion and hypertrophic or hypertrophic burn
CC scar. AAH57577 to AAH62099 represent sequences used in the
CC exemplification of the present invention.
XX
SQ Sequence 18 BP; 7 A; 2 C; 2 G; 7 T; 0 other;

```
  Query Match             0.9%;  Score 11.6;  DB 1;  Length 18;
  Best Local Similarity   77.8%;  Pred. No. 7.3e+02;
  Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy        830 GGATTTTTTTCTGTTAAA 847
              ||| ||| ||| |||||
Db          1 GGAAATTTCTCTATTAAA 18
```

RESULT 894
ABZ11062
ID ABZ11062 standard; DNA; 18 BP.
XX
AC ABZ11062;
XX
DT 16-JAN-2003 (first entry)
XX
DE Haematopoietic cell proliferation disorder related oligonucleotide #1202.
XX
KW Human; haematopoietic cell proliferation disorder; cytostatic;
KW gene therapy; lymphocytic leukaemia; acute myelogenous leukaemia;
KW cytosine methylation state; probe; primer; ss.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO200277272-A2.
XX
PD 03-OCT-2002.
XX
PF 26-MAR-2002; 2002WO-EP03401.
XX
PR 26-MAR-2001; 2001US-278333P.
XX

```
A   (EPIG-) EPIGENOMICS AG.
X
I   Berlin K,  Braun A,  Distler J,  Guetig D,  Howe A,  Mueller J;
I   Olek A,  Piepenbrock C,  Adorjan P,  Grabs G,  Lesche R,  Leu B;
I   Lewin A,  Lipscher E,  Maier S,  Model F,  Mueller V,  Otto T;
I   Pelet C,  Schwope I,  Ziebarth H;
X
R   WPI; 2003-018942/01.
X
T   Detecting and differentiating between hematopoietic cell proliferative
T   disorders, comprises contacting a target nucleic acid with a reagent
T   that distinguishes between methylated and non-methylated CpG
T   dinucleotides -
X
S   Claim 15; Page 78; 117pp; English.
X
C   The present invention describes a method for detecting and
C   differentiating between haematopoietic cell proliferative disorders
C   associated with at least 1 gene and/or their regulatory regions in a
C   subject. The method comprises contacting a target nucleic acid in a
C   biological sample obtained from the subject with at least 1 reagent,
C   which distinguishes between methylated and non-methylated CpG
C   dinucleotides within the target nucleic acid. ABZ09861 to ABZ11118
C   represent specifically claimed nucleotide sequences from the present
C   invention. Oligonucleotides from the present invention can be used: for
C   differentiating between healthy haematopoietic cells and proliferative
C   disorder haematopoietic cells; for differentiating between acute
C   lymphocytic leukaemia and acute myelogenous leukaemia; as probes for
C   determining the cytosine methylation state and/or single nucleotide
C   polymorphisms (SNPs) of haematopoietic cell proliferation disorder
C   related sequences and their complements; and as primers for the
C   amplification of haematopoietic cell proliferation disorder related
C   DNA sequences. The nucleotide sequences from the present invention can
C   also be used for detecting a predisposition to, differentiation between
C   subclasses, diagnosis, prognosis, treatment and/or monitoring of
C   haematopoietic cell proliferative disorders. The present method enables
C   a highly specific classification of haematopoietic cell proliferative
C   disorders allowing for improved and informed treatment of patients.
X
Q   Sequence 18 BP; 4 A; 0 C; 3 G; 11 T; 0 other;

 Query Match             0.9%;  Score 11.6;  DB 1;  Length 18;
 Best Local Similarity   77.8%;  Pred. No. 7.3e+02;
 Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1263 AATTTTTTAGTATAAGTA 1280
              | ||| || || ||||||
Db          1 ATTTTGTTTGTTTAAGTA 18


RESULT 895
AAA62676/c
ID   AAA62676 standard; DNA; 19 BP.
XX
AC   AAA62676;
XX
DT   08-JAN-2001  (first entry)
XX
DE   Cry2A family gene shuffling PCR primer 1 for.
XX
KW   Cry2Aa; Cry2Ab; Cry2Ac; family gene shuffling; recombinant;
KW   nucleic acid diversity; mutagen synthesis; PCR primer; ss.
XX
OS   Unidentified.
XX
PN   WO200042561-A2.
XX
PD   20-JUL-2000.
XX
PF   18-JAN-2000; 2000WO-US01203.
XX
PR   19-JAN-1999;   99US-0116447.
PR   05-FEB-1999;   99US-0118813.
PR   05-FEB-1999;   99US-0118854.
PR   24-JUN-1999;   99US-0141049.
PR   28-SEP-1999;   99US-0408392.
PR   28-SEP-1999;   99US-0408393.
PR   12-OCT-1999;   99US-0416375.
PR   12-OCT-1999;   99US-0416837.
XX
PA   (MAXY-) MAXYGEN INC.
XX
PI   Crameri A,  Stemmer WPC,  Minshull J,  Bass SH,  Welch M,  Ness JE;
PI   Gustafsson C,  Patten PA;
XX
DR   WPI; 2000-482862/42.
XX
PT   Recombining homologous nucleic acids to produce family shuffle nucleic
PT   acids comprises hybridizing and elongating a set of family gene
PT   shuffling oligonucleotides and providing a population of recombined
PT   nucleic acids -
XX
PS   Example; Page 54; 74pp; English.
XX
CC   The present sequence is a PCR primer used in a method for shuffling genes
CC   cry2Aa, cry2Ab and cry2Ac. Gene shuffling is a process for
CC   generating recombinant nucleic acids. Oligonucleotide assisted
CC   approaches can be used to produce family shuffled nucleic acids without
CC   isolating or cloning full-length homologous nucleic acids. Family gene
CC   shuffling oligonucleotides are provided by aligning homologous nucleic
CC   acid sequences to select conserved regions of sequence identity and
CC   regions of sequence diversity. A plurality of oligonucleotides are
CC   synthesised which correspond to at least one region of sequence
CC   diversity. In this example, the oligonucleotides were spiked into
CC   the assembling mix and PCR was then performed using the present primer.
CC   The method can be used to produce a family of shuffled nucleic acids, to
CC   produce recombinant molecules with greater molecular diversity and to
CC   generate classical mutagens. Homologous nucleic acids with low sequence
CC   similarity and non-homologous nucleic acids are also easily recombined.
XX
SQ   Sequence 19 BP; 9 A; 0 C; 3 G; 7 T; 0 other;

 Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
 Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
 Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy        501 ATGCAATACAAGATTCCT 518
              || |||||| |||| |
Db         18 ATTCAATACATTATTCAT 1


RESULT 896
AAT74905/c
ID   AAT74905 standard; RNA; 19 BP.
XX
AC   AAT74905;
XX
DT   27-AUG-1997  (first entry)
XX
DE   5' end fragment of Alfalfa Mosaic Virus 4.
XX
KW   Alfalfa Mosaic virus 4; influenza endonuclease; detection;
KW   electrophoresis; substrate cleavage; ss..
XX
OS   Alfalfa Mosaic virus 4.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1
FT                   /*tag=  a
FT                   /mod_base= Triphosphorylated-G
FT   modified_base   2
FT                   /*tag=  b
FT                   /mod_base= 2'-OMe-U
XX
PN   WO9640994-A1.
XX
```

```
19-DEC-1996.

03-JUN-1996;   96WO-US08330.

07-JUN-1995;   95US-0487760.

(MERI ) MERCK & CO INC.

Cole JL,  Kuo LC,  Olsen DB;

WPI; 1997-052365/05.

Detection of enzyme pref. endonuclease or ribozyme, in a sample  -
by cleavage of an RNA substrate to generate a primer for a labelled
polymerase extension reaction

Examples; Page 14; 34pp; English.

This sequence represents the 5' end of Alfalfa Mosaic virus 4 RNA.
This sequence was used in the method of the invention for detecting
the enzyme activity in a sample.  The method comprises: (a) adding
an oligonucleotide substrate to a sample to generate an oligonucleotide
product; (b) hybridising the oligonucleotide prod. with a DNA template
which comprises a first segment complementary to the oligonucleotide
and a 5' extension of at least one nucleotide attached to the 5' end
of the DNA segment, such that a DNA:RNA hybrid or a DNA:DNA duplex is
formed; (c) adding a DNA polymerase and labelled mononucleotides such
that the DNA polymerase incorporates the mononucleotides to the 3' end
of the oligonucleotide; and (d) measuring the amt. of labelled hybrid
prod. as a measure of the amt. of the enzyme activity in the sample.
The method is used to assay for enzymes e.g. endonuclease, exonuclease
or ribozymes, that act on substrates to generate single stranded
oligonucleotide prods. by cleaving the substrate which then forms a
primer for extension by a DNA polymerase on a template. It can be
used to identify the position where the enzyme cleaves the substrate.
The assay can also be used to screen for inhibitors of these enzymes.

Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

      1589 GAAATATAAAAGTAAATA 1606
           |||| ||||| |||| |
        19 GAAAATTAAAAATAAAAA 2


SULT 897
T49298/c
AAT49298 standard; RNA; 19 BP.

AAT49298;

27-AUG-1997  (first entry)

5' end fragment of Alfalfa Mosaic Virus 4.

Alfalfa Mosaic virus 4; influenza endonuclease; detection;
electrophoresis; substrate cleavage; ss.

Alfalfa Mosaic virus 4.

WO9640993-A1.

19-DEC-1996.

03-JUN-1996;   96WO-US08320.

07-JUN-1995;   95US-0487759.

(MERI ) MERCK & CO INC.

Cole JL,  Kuo LC,  Olsen DB;

WPI; 1997-052364/05.

Detection of influenza virus endonuclease in a sample - by cleavage
of an RNA substrate to generate a primer for a labelled polymerase
extension reaction

Claim 6; Page 12; 28pp; English.

This sequence represents the 5' end of Alfalfa Mosaic virus 4 RNA.
This sequence was used as a substrate for influenza endonuclease in
the method of the invention.  The method allows detection of influenza
endonuclease activity in a sample and comprises: (a) adding an influenza
endonuclease substrate to a sample to generate an RNA product; (b)
hybridising the RNA prod. with a DNA template which comprises a first
segment complementary to the RNA and a 5' extension of at least one
nucleotide attached to the 5' end of the DNA segment, such that a
DNA:RNA hybrid is formed; (c) adding a DNA polymerase and labelled
mononucleotides such that the DNA polymerase incorporates the
mononucleotides to the 3' end of the RNA in the RNA:DNA duplex; and
(d) measuring the amount of labelled hybrid prod. as a measure of the
amount of influenza endonuclease activity.  The method is used to
quantitate the amount of influenza endonuclease by cleaving the RNA
substrate which then forms a primer for extension by a DNA polymerase
on a template.  The assay does not involve an electrophoresis step and
thus may be run in a 96-well microtitre plate. The assay also monitors
substrate cleavage at the correct position thereby discriminating
against non-specific cleavage products.

Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

  Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
  Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
  Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1589 GAAATATAAAAGTAAATA 1606
              |||| ||||| |||| |
Db         19 GAAAATTAAAAATAAAAA 2


RESULT 898
AAT47269/c
ID   AAT47269 standard; RNA; 19 BP.
XX
AC   AAT47269;
XX
DT   28-AUG-1997  (first entry)
XX
DE   Capped RNA influenza endonuclease substrate #3.
XX
KW   Capped RNA molecule; mRNA maturation; translation initiation; influenza;
KW   endonuclease aptamer; RNase; therapy; inhibitor; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base    1
FT                    /*tag=  a
FT                    /mod_base= triphosphorylated
FT   modified_base    2
FT                    /*tag=  b
FT                    /mod_base= 2'-O-methyluridine
FT   modified_base    13
FT                    /*tag=  c
FT                    /mod_base= 2'-deoxyadenosine
XX
PN   WO9640159-A1.
XX
PD   19-DEC-1996.
XX
PF   03-JUN-1996;   96WO-US08394.
XX
```

```
R   07-JUN-1995;   95US-0480068.
X
A   (MERI ) MERCK & CO INC.
X
I   Benseler F,  Cole JL,  Kuo LC,  Olsen DB;
X
R   WPI; 1997-051868/05.
X
T   Production of capped RNA or analogues - useful as substrates for
T   influenza virus associated virally encoded endonuclease
X
S   Claim 18; Page 13; 39pp; English.
X
C   AAT47264-T47280 represent capped RNA molecules produced by the method of
C   the invention. The method of the invention is for producing capped RNA
C   or RNA analogues. The method comprises reacting a RNA or analogue
C   oligonucleotide with a phosphate addition agent to form a RNA or
C   analogue mono-, di- or triphosphate, which is then capped. The presence
C   of the cap is important for mRNA maturation, initiation of translation,
C   and protects the mRNA against various RNases present in the cell. The
C   capped RNA or analogue is an influenza endonuclease aptamer, useful for
C   treating or preventing an influenza infection in an animal. The synthetic
C   capped RNA are substrates for virally encoded endonuclease associated
C   with influenza virus. The short non-extendible (due to their length or
C   because of the modification of the 3' end of the oligo) RNA molecules are
C   potent inhibitors of the cleavage of capped RNA by influenza
C   endonuclease. They may be used to investigate viral and cellular
C   mechanisms of transcription/translation, or mRNA maturation.
X
Q   Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

 Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
 Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
 Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1589 GAAATATAAAAGTAAATA 1606
              ||||  ||||| |||| |
Db         19 GAAAATTAAAAATAAAAA 2


RESULT 899
AAT47270/c
ID   AAT47270 standard; RNA; 19 BP.
XX
AC   AAT47270;
XX
DT   28-AUG-1997  (first entry)
XX
DE   Capped RNA influenza endonuclease substrate #4.
XX
KW   Capped RNA molecule; mRNA maturation; translation initiation; influenza;
KW   endonuclease aptamer; RNase; therapy; inhibitor; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1
FT                   /*tag=  a
FT                   /mod_base= triphosphorylated
FT   modified_base   2
FT                   /*tag=  b
FT                   /mod_base= 2'-O-methyluridine
FT   modified_base   13
FT                   /*tag=  c
FT                   /mod_base= 2'-deoxy-2'-fluoro-adenosine
XX
PN   WO9640159-A1.
XX
PD   19-DEC-1996.
XX
PF   03-JUN-1996;   96WO-US08394.
XX
PR   07-JUN-1995;   95US-0480068.
XX
PA   (MERI ) MERCK & CO INC.
XX
PI   Benseler F,  Cole JL,  Kuo LC,  Olsen DB;
XX
DR   WPI; 1997-051868/05.
XX
PT   Production of capped RNA or analogues - useful as substrates for
PT   influenza virus associated virally encoded endonuclease
XX
PS   Claim 18; Page 13; 39pp; English.
XX
CC   AAT47264-T47280 represent capped RNA molecules produced by the method of
CC   the invention. The method of the invention is for producing capped RNA
CC   or RNA analogues. The method comprises reacting a RNA or analogue
CC   oligonucleotide with a phosphate addition agent to form a RNA or
CC   analogue mono-, di- or triphosphate, which is then capped. The presence
CC   of the cap is important for mRNA maturation, initiation of translation,
CC   and protects the mRNA against various RNases present in the cell. The
CC   capped RNA or analogue is an influenza endonuclease aptamer, useful for
CC   treating or preventing an influenza infection in an animal. The synthetic
CC   capped RNA are substrates for virally encoded endonuclease associated
CC   with influenza virus. The short non-extendible (due to their length or
CC   because of the modification of the 3' end of the oligo) RNA molecules are
CC   potent inhibitors of the cleavage of capped RNA by influenza
CC   endonuclease. They may be used to investigate viral and cellular
CC   mechanisms of transcription/translation, or mRNA maturation.
XX
SQ   Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

  Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
  Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
  Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1589 GAAATATAAAAGTAAATA 1606
              ||||  ||||| |||| |
Db         19 GAAAATTAAAAATAAAAA 2


RESULT 900
AAT47271/c
ID   AAT47271 standard; RNA; 19 BP.
XX
AC   AAT47271;
XX
DT   28-AUG-1997  (first entry)
XX
DE   Capped RNA influenza endonuclease substrate #5.
XX
KW   Capped RNA molecule; mRNA maturation; translation initiation; influenza;
KW   endonuclease aptamer; RNase; therapy; inhibitor; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1
FT                   /*tag=  a
FT                   /mod_base= triphosphorylated
FT   modified_base   2
FT                   /*tag=  b
FT                   /mod_base= 2'-O-methyluridine
FT   modified_base   6
FT                   /*tag=  c
FT                   /mod_base= 2'-deoxy-2'-fluoro-uridine
FT   modified_base   12
FT                   /*tag=  d
FT                   /mod_base= 2'-deoxy-2'-fluoro-uridine
XX
PN   WO9640159-A1.
XX
PD   19-DEC-1996.
XX
PF   03-JUN-1996;   96WO-US08394.
```

```
07-JUN-1995;   95US-0480068.

(MERI ) MERCK & CO INC.

Benseler F,  Cole JL,  Kuo LC,  Olsen DB;

WPI; 1997-051868/05.

Production of capped RNA or analogues - useful as substrates for
influenza virus associated virally encoded endonuclease

Claim 18; Page 14; 39pp; English.

AAT47264-T47280 represent capped RNA molecules produced by the method of
the invention. The method of the invention is for producing capped RNA
or RNA analogues. The method comprises reacting a RNA or analogue
oligonucleotide with a phosphate addition agent to form a RNA or
analogue mono-, di- or triphosphate, which is then capped. The presence
of the cap is important for mRNA maturation, initiation of translation,
and protects the mRNA against various RNases present in the cell. The
capped RNA or analogue is an influenza endonuclease aptamer, useful for
treating or preventing an influenza infection in an animal. The synthetic
capped RNA are substrates for virally encoded endonuclease associated
with influenza virus. The short non-extendible (due to their length or
because of the modification of the 3' end of the oligo) RNA molecules are
potent inhibitors of the cleavage of capped RNA by influenza
endonuclease. They may be used to investigate viral and cellular
mechanisms of transcription/translation, or mRNA maturation.

Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

       1589 GAAATATAAAAGTAAATA 1606
            ||||  ||||| |||| |
         19 GAAAATTAAAAATAAAAA 2


SULT 901
T47272/c
   AAT47272 standard; RNA; 19 BP.

   AAT47272;

   28-AUG-1997  (first entry)

   Capped RNA influenza endonuclease substrate #6.

   Capped RNA molecule; mRNA maturation; translation initiation; influenza;
   endonuclease aptamer; RNase; therapy; inhibitor; ss.

   Synthetic.

   Key             Location/Qualifiers
   modified_base   1
                   /*tag=  a
                   /mod_base= triphosphorylated
   modified_base   2
                   /*tag=  b
                   /mod_base= 2'-O-methyluridine
   modified_base   6
                   /*tag=  c
                   /mod_base= 2'-deoxy-2'-fluoro-uridine
   modified_base   12
                   /*tag=  d
                   /mod_base= 2'-deoxy-2'-fluoro-uridine
   modified_base   13
                   /*tag=  e
                   /mod_base= 2'-deoxy-2'-fluoro-adenosine
```

```
PN   WO9640159-A1.
XX
PD   19-DEC-1996.
XX
PF   03-JUN-1996;   96WO-US08394.
XX
PR   07-JUN-1995;   95US-0480068.
XX
PA   (MERI ) MERCK & CO INC.
XX
PI   Benseler F,  Cole JL,  Kuo LC,  Olsen DB;
XX
DR   WPI; 1997-051868/05.
XX
PT   Production of capped RNA or analogues - useful as substrates for
PT   influenza virus associated virally encoded endonuclease
XX
PS   Claim 18; Page 14; 39pp; English.
XX
CC   AAT47264-T47280 represent capped RNA molecules produced by the method of
CC   the invention. The method of the invention is for producing capped RNA
CC   or RNA analogues. The method comprises reacting a RNA or analogue
CC   oligonucleotide with a phosphate addition agent to form a RNA or
CC   analogue mono-, di- or triphosphate, which is then capped. The presence
CC   of the cap is important for mRNA maturation, initiation of translation,
CC   and protects the mRNA against various RNases present in the cell. The
CC   capped RNA or analogue is an influenza endonuclease aptamer, useful for
CC   treating or preventing an influenza infection in an animal. The synthetic
CC   capped RNA are substrates for virally encoded endonuclease associated
CC   with influenza virus. The short non-extendible (due to their length or
CC   because of the modification of the 3' end of the oligo) RNA molecules are
CC   potent inhibitors of the cleavage of capped RNA by influenza
CC   endonuclease. They may be used to investigate viral and cellular
CC   mechanisms of transcription/translation, or mRNA maturation.
XX
SQ   Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

  Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
  Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
  Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1589 GAAATATAAAAGTAAATA 1606
              ||||  ||||| |||| |
Db         19 GAAAATTAAAAATAAAAA 2


RESULT 902
AAT47273/c
ID   AAT47273 standard; RNA; 19 BP.
XX
AC   AAT47273;
XX
DT   28-AUG-1997  (first entry)
XX
DE   Capped RNA influenza endonuclease substrate #7.
XX
KW   Capped RNA molecule; mRNA maturation; translation initiation; influenza;
KW   endonuclease aptamer; RNase; therapy; inhibitor; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   modified_base   1
FT                   /*tag=  a
FT                   /mod_base= triphosphorylated
FT   modified_base   2
FT                   /*tag=  b
FT                   /mod_base= 2'-O-methyluridine
FT   misc_feature    19
FT                   /*tag=  c
FT                   /note= "biotin labelled for attachment to solid support"
XX
PN   WO9640159-A1.
```

XX
DT 19-DEC-1996.
XX
PF 03-JUN-1996; 96WO-US08394.
XX
PR 07-JUN-1995; 95US-0480068.
XX
PA (MERI) MERCK & CO INC.
XX
PI Benseler F, Cole JL, Kuo LC, Olsen DB;
XX
DR WPI; 1997-051868/05.
XX
PT Production of capped RNA or analogues - useful as substrates for
PT influenza virus associated virally encoded endonuclease
XX
PS Claim 18; Page 14; 39pp; English.
XX
CC AAT47264-T47280 represent capped RNA molecules produced by the method of
CC the invention. The method of the invention is for producing capped RNA
CC or RNA analogues. The method comprises reacting a RNA or analogue
CC oligonucleotide with a phosphate addition agent to form a RNA or
CC analogue mono-, di- or triphosphate, which is then capped. The presence
CC of the cap is important for mRNA maturation, initiation of translation,
CC and protects the mRNA against various RNases present in the cell. The
CC capped RNA or analogue is an influenza endonuclease aptamer, useful for
CC treating or preventing an influenza infection in an animal. The synthetic
CC capped RNA are substrates for virally encoded endonuclease associated
CC with influenza virus. The short non-extendible (due to their length or
CC because of the modification of the 3' end of the oligo) RNA molecules are
CC potent inhibitors of the cleavage of capped RNA by influenza
CC endonuclease. They may be used to investigate viral and cellular
CC mechanisms of transcription/translation, or mRNA maturation.
XX
SQ Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

Query Match 0.9%; Score 11.6; DB 1; Length 19;
Best Local Similarity 77.8%; Pred. No. 7.5e+02;
Matches 14; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 1589 GAAATATAAAAGTAAATA 1606
|||| ||||| |||| |
Db 19 GAAAATTAAAAATAAAAA 2

RESULT 904
AAT47264/c
ID AAT47264 standard; RNA; 19 BP.
XX
AC AAT47264;
XX
DT 27-AUG-1997 (first entry)
XX
DE 5' fragment of alfalfa mosaic virus.
XX
KW Capped RNA molecule; mRNA maturation; translation initiation; influenza;
KW endonuclease aptamer; RNase; therapy; inhibitor; ss.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT modified_base 1
FT /*tag= a
FT /mod_base= triphosphorylated
FT modified_base 2
FT /*tag= b
FT /mod_base= 2'-O-methyluridine
XX
PN WO9640159-A1.
XX
PD 19-DEC-1996.
XX
PF 03-JUN-1996; 96WO-US08394.
XX
PR 07-JUN-1995; 95US-0480068.
XX
PA (MERI) MERCK & CO INC.

Benseler F, Cole JL, Kuo LC, Olsen DB;

WPI; 1997-051868/05.

Production of capped RNA or analogues - useful as substrates for influenza virus associated virally encoded endonuclease

Claim 18; Page 12; 39pp; English.

AAT47264-T47280 represent capped RNA molecules produced by the method of the invention. The method of the invention is for producing capped RNA or RNA analogues. The method comprises reacting a RNA or analogue oligonucleotide with a phosphate addition agent to form a RNA or analogue mono-, di- or triphosphate, which is then capped. The presence of the cap is important for mRNA maturation, initiation of translation, and protects the mRNA against various RNases present in the cell. The capped RNA or analogue is an influenza endonuclease aptamer, useful for treating or preventing an influenza infection in an animal. The synthetic capped RNA are substrates for virally encoded endonuclease associated with influenza virus. The short non-extendible (due to their length or because of the modification of the 3' end of the oligo) RNA molecules are potent inhibitors of the cleavage of capped RNA by influenza endonuclease. They may be used to investigate viral and cellular mechanisms of transcription/translation, or mRNA maturation.

Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

```
Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

       1589 GAAATATAAAAGTAAATA 1606
            |||| ||||| |||| |
         19 GAAAATTAAAAATAAAAA 2
```

SULT 905
T47276/c
AAT47276 standard; RNA; 19 BP.

AAT47276;

28-AUG-1997 (first entry)

Capped RNA influenza endonuclease substrate #8.

Capped RNA molecule; mRNA maturation; translation initiation; influenza; endonuclease aptamer; RNase; therapy; inhibitor; ss.

Synthetic.

Key	Location/Qualifiers
modified_base	1
	/*tag= a
	/mod_base= triphosphorylated

WO9640159-A1.

19-DEC-1996.

03-JUN-1996; 96WO-US08394.

07-JUN-1995; 95US-0480068.

(MERI) MERCK & CO INC.

Benseler F, Cole JL, Kuo LC, Olsen DB;

WPI; 1997-051868/05.

Production of capped RNA or analogues - useful as substrates for influenza virus associated virally encoded endonuclease

XX
PS Claim 18; Page 14; 39pp; English.
XX
CC AAT47264-T47280 represent capped RNA molecules produced by the method of
CC the invention. The method of the invention is for producing capped RNA
CC or RNA analogues. The method comprises reacting a RNA or analogue
CC oligonucleotide with a phosphate addition agent to form a RNA or
CC analogue mono-, di- or triphosphate, which is then capped. The presence
CC of the cap is important for mRNA maturation, initiation of translation,
CC and protects the mRNA against various RNases present in the cell. The
CC capped RNA or analogue is an influenza endonuclease aptamer, useful for
CC treating or preventing an influenza infection in an animal. The synthetic
CC capped RNA are substrates for virally encoded endonuclease associated
CC with influenza virus. The short non-extendible (due to their length or
CC because of the modification of the 3' end of the oligo) RNA molecules are
CC potent inhibitors of the cleavage of capped RNA by influenza
CC endonuclease. They may be used to investigate viral and cellular
CC mechanisms of transcription/translation, or mRNA maturation.
XX
SQ Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

```
  Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
  Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
  Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1589 GAAATATAAAAGTAAATA 1606
              |||| ||||| |||| |
Db         19 GAAAATTAAAAATAAAAA 2
```

RESULT 906
AAT47277/c
ID AAT47277 standard; RNA; 19 BP.
XX
AC AAT47277;
XX
DT 28-AUG-1997 (first entry)
XX
DE Capped RNA influenza endonuclease substrate #9.
XX
KW Capped RNA molecule; mRNA maturation; translation initiation; influenza;
KW endonuclease aptamer; RNase; therapy; inhibitor; ss.
XX
OS Synthetic.
XX

FH	Key	Location/Qualifiers
FT	modified_base	1
FT		/*tag= a
FT		/mod_base= triphosphorylated
FT	modified_base	2
FT		/*tag= b
FT		/mod_base= 2'-O-methyluridine
FT	modified_base	3
FT		/*tag= c
FT		/mod_base= 2'-O-methyluridine

XX
PN WO9640159-A1.
XX
PD 19-DEC-1996.
XX
PF 03-JUN-1996; 96WO-US08394.
XX
PR 07-JUN-1995; 95US-0480068.
XX
PA (MERI) MERCK & CO INC.
XX
PI Benseler F, Cole JL, Kuo LC, Olsen DB;
XX
DR WPI; 1997-051868/05.
XX
PT Production of capped RNA or analogues - useful as substrates for
PT influenza virus associated virally encoded endonuclease
XX

```
S   Claim 18; Page 15; 39pp; English.
X
C   AAT47264-T47280 represent capped RNA molecules produced by the method of
C   the invention. The method of the invention is for producing capped RNA
C   or RNA analogues. The method comprises reacting a RNA or analogue
C   oligonucleotide with a phosphate addition agent to form a RNA or
C   analogue mono-, di- or triphosphate, which is then capped. The presence
C   of the cap is important for mRNA maturation, initiation of translation,
C   and protects the mRNA against various RNases present in the cell. The
C   capped RNA or analogue is an influenza endonuclease aptamer, useful for
C   treating or preventing an influenza infection in an animal. The synthetic
C   capped RNA are substrates for virally encoded endonuclease associated
C   with influenza virus. The short non-extendible (due to their length or
C   because of the modification of the 3' end of the oligo) RNA molecules are
C   potent inhibitors of the cleavage of capped RNA by influenza
C   endonuclease. They may be used to investigate viral and cellular
C   mechanisms of transcription/translation, or mRNA maturation.
X
Q   Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

 Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
 Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
 Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

y       1589 GAAATATAAAAGTAAATA 1606
             ||||  ||||| |||| |
b         19 GAAAATTAAAAATAAAAA 2


ESULT 907
AT47278/c
D   AAT47278 standard; RNA; 19 BP.
X
C   AAT47278;
X
T   28-AUG-1997  (first entry)
X
E   Capped RNA influenza endonuclease substrate #10.
X
W   Capped RNA molecule; mRNA maturation; translation initiation; influenza;
W   endonuclease aptamer; RNase; therapy; inhibitor; ss.
X
S   Synthetic.
X
H   Key             Location/Qualifiers
T   modified_base   1
T                   /*tag=  a
T                   /mod_base= triphosphorylated
T   modified_base   2
T                   /*tag=  b
T                   /mod_base= 2'-O-methyluridine
T   modified_base   13
T                   /*tag=  c
T                   /mod_base= phosphorothioated
X
N   WO9640159-A1.
X
D   19-DEC-1996.
X
F   03-JUN-1996;   96WO-US08394.
X
R   07-JUN-1995;   95US-0480068.
X
A   (MERI ) MERCK & CO INC.
X
I   Benseler F,  Cole JL,  Kuo LC,  Olsen DB;
X
R   WPI; 1997-051868/05.
X
T   Production of capped RNA or analogues - useful as substrates for
T   influenza virus associated virally encoded endonuclease
X
S   Claim 18; Page 15; 39pp; English.
```

```
XX
CC  AAT47264-T47280 represent capped RNA molecules produced by the method of
CC  the invention. The method of the invention is for producing capped RNA
CC  or RNA analogues. The method comprises reacting a RNA or analogue
CC  oligonucleotide with a phosphate addition agent to form a RNA or
CC  analogue mono-, di- or triphosphate, which is then capped. The presence
CC  of the cap is important for mRNA maturation, initiation of translation,
CC  and protects the mRNA against various RNases present in the cell. The
CC  capped RNA or analogue is an influenza endonuclease aptamer, useful for
CC  treating or preventing an influenza infection in an animal. The synthetic
CC  capped RNA are substrates for virally encoded endonuclease associated
CC  with influenza virus. The short non-extendible (due to their length or
CC  because of the modification of the 3' end of the oligo) RNA molecules are
CC  potent inhibitors of the cleavage of capped RNA by influenza
CC  endonuclease. They may be used to investigate viral and cellular
CC  mechanisms of transcription/translation, or mRNA maturation.
XX
SQ  Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

  Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
  Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
  Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy      1589 GAAATATAAAAGTAAATA 1606
             ||||  ||||| |||| |
Db        19 GAAAATTAAAAATAAAAA 2


RESULT 908
AAT47279/c
ID  AAT47279 standard; RNA; 19 BP.
XX
AC  AAT47279;
XX
DT  28-AUG-1997  (first entry)
XX
DE  Capped RNA influenza endonuclease substrate #11.
XX
KW  Capped RNA molecule; mRNA maturation; translation initiation; influenza;
KW  endonuclease aptamer; RNase; therapy; inhibitor; ss.
XX
OS  Synthetic.
XX
FH  Key             Location/Qualifiers
FT  modified_base   1
FT                  /*tag=  a
PT                  /mod_base= triphosphorylated
FT  modified_base   2
PT                  /*tag=  b
PT                  /mod_base= 2'-O-methyluridine
FT  modified_base   12
FT                  /*tag=  c
FT                  /mod_base= phosphorothioated
FT  modified_base   13
FT                  /*tag=  d
FT                  /mod_base= phosphorothioated
FT  modified_base   14
FT                  /*tag=  e
FT                  /mod_base= phosphorothioated
XX
PN  WO9640159-A1.
XX
PD  19-DEC-1996.
XX
PF  03-JUN-1996;   96WO-US08394.
XX
PR  07-JUN-1995;   95US-0480068.
XX
PA  (MERI ) MERCK & CO INC.
XX
PI  Benseler F,  Cole JL,  Kuo LC,  Olsen DB;
XX
DR  WPI; 1997-051868/05.
```

Production of capped RNA or analogues - useful as substrates for influenza virus associated virally encoded endonuclease

Claim 18; Page 15; 39pp; English.

AAT47264-T47280 represent capped RNA molecules produced by the method of the invention. The method of the invention is for producing capped RNA or RNA analogues. The method comprises reacting a RNA or analogue oligonucleotide with a phosphate addition agent to form a RNA or analogue mono-, di- or triphosphate, which is then capped. The presence of the cap is important for mRNA maturation, initiation of translation, and protects the mRNA against various RNases present in the cell. The capped RNA or analogue is an influenza endonuclease aptamer, useful for treating or preventing an influenza infection in an animal. The synthetic capped RNA are substrates for virally encoded endonuclease associated with influenza virus. The short non-extendible (due to their length or because of the modification of the 3' end of the oligo) RNA molecules are potent inhibitors of the cleavage of capped RNA by influenza endonuclease. They may be used to investigate viral and cellular mechanisms of transcription/translation, or mRNA maturation.

Sequence 19 BP; 3 A; 1 C; 1 G; 14 U; 0 other;

```
Query Match             0.9%;  Score 11.6;  DB 1;  Length 19;
Best Local Similarity   77.8%;  Pred. No. 7.5e+02;
Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

      1589 GAAATATAAAAGTAAATA 1606
           ||||  ||||| |||| |
        19 GAAAATTAAAAATAAAAA 2
```

RESULT 909
AAC92878
AAC92878 standard; DNA; 20 BP.

AAC92878;

27-MAR-2001 (first entry)

Human PI3 kinase p55 gamma antisense oligonucleotide, SEQ ID NO:61.

Human phosphatidylinositol 3-kinase p55 gamma regulatory subunit; PI3 kinase p55 gamma; hp55-gamma; p55-gamma; PIK3R3; p55PIK; signal transduction; downstream effector; receptor tyrosine kinase; insulin receptor; IR; insulin-like growth factor receptor; IGFR; cell growth; differentiation; apoptosis; developmental regulation; alternative splicing; tumour formation; cancer; inflammation; infection; expression inhibition; phosphorothioate; antisense oligonucleotide; ss.

Homo sapiens.

US6165790-A.

26-DEC-2000.

03-NOV-1999; 99US-0433694.

03-NOV-1999; 99US-0433694.

(ISIS-) ISIS PHARM INC.

Borchers AH, Cowsert LM, Ward DT;

WPI; 2001-101697/11.

Novel antisense compound targeted to human PI3 kinase p55 gamma specifically hybridizes with and inhibits the expression of human PI3 kinase p55 gamma, useful for modulating the expression of PI3 kinase p55 gamma in cells -

PS Example 15; Column 41-42; 39pp; English.

CC Sequences AAC92827-C92906 represent phosphorothioate antisense oligonucleotides targetted to the phosphatidylinositol 3-kinase p55 gamma regulatory subunit (PI3 kinase p55 gamma) gene, which inhibit its expression. The antisense oligonucleotides were designed to target different regions of human PI3 kinase p55 mRNA species, and were analysed for their effect on PI3 kinase p55 mRNA levels by quantitative real-time PCR. PI3 kinase p55 gamma (also known as hp55-gamma, p55-gamma, PIK3R3 and p55PIK) is one of several PI3 kinase regulatory subunits that may associate with the PI3 kinase catalytic subunit to form a heterodimeric PI3 kinase holoenzyme. PI3 kinases act as downstream effectors of receptor tyrosine kinases such as growth factor and hormone receptors and oncogene products, and are found in association with the cytoplasmic domains of such receptors. PI3 kinase p55 gamma is able to interact with both the insulin receptor (IR) and the insulin-like growth factor receptor (IGFR), which play important roles in growth, differentiation and apoptosis. PI3 kinase p55 gamma is thought to be developmentally regulated, as four distinct mRNA species are found in adult tissues, while only the larger mRNA is expressed in foetal tissues. The oligonucleotides of the invention are useful for diagnosis, prevention and treatment of conditions associated with PI3 kinase p55 expression, such as tumour formation, inflammation and certain infections, and allow expression level modulation of the alternatively spliced forms of PI3 kinase p55.

SQ Sequence 20 BP; 7 A; 1 C; 1 G; 11 T; 0 other;

```
  Query Match             0.9%;  Score 11.6;  DB 1;  Length 20;
  Best Local Similarity   77.8%;  Pred. No. 7.6e+02;
  Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1561 AATTTTTTTTACTGTTTC 1578
              || | |||| | ||||||
Db          1 AAATATTTTAATTGTTTC 18
```

RESULT 910
ABK85435/c
ID ABK85435 standard; DNA; 20 BP.

AC ABK85435;

DT 14-AUG-2002 (first entry)

DE Oligonucleotide #13 binding to specific site of HIV-1 RNA.

KW Human immunodeficiency virus type 1; HIV-1 detection method; primer; probe; ss.

OS Human immunodeficiency virus type 1.

PN EP1203826-A2.

PD 08-MAY-2002.

PF 30-OCT-2001; 2001EP-0125378.

PR 30-OCT-2000; 2000JP-0334937.

PA (TOYJ) TOSOH CORP.

PI Ishizuka T, Ishiguro T, Saitoh J;

DR WPI; 2002-473032/51.

PT An oligonucleotide useful for detection of an RNA derived from HIV-1 in clinical tests and diagnosis -

PS Claim 1; Page 16; 34pp; English.

CC The present invention relates to oligonucleotides binding to specific sites of human immunodeficiency virus type 1 (HIV-1) RNA. The

```
:C   oligonucleotides are useful for detecting HIV-1 in clinical tests
:C   and diagnosis. The oligonucleotides provide simple, speedy and
:C   sensitive detection of HIV-1 RNA which can bind to an intramolecularly
:C   free region of the genomic RNA of HIV-1 at relatively low and constant
:C   temperatures. The detection method comprises synthesising a cDNA by
:C   the action of an RNA-dependent DNA polymerase by using a specific
:C   sequence in an RNA derived from HIV-1 anticipated in a sample as a
:C   template, a first primer containing a sequence complementary to the
:C   specific sequence and a second primer containing a sequence homologous
:C   to the specific sequence (either of which additionally has a promoter
:C   sequence for the RNA polymerase at the 5'end). ABK85423-ABK85440
:C   represent oligonucleotides binding to specific sites of HIV-1 RNA.
:C   They can be used either as first primers or probes.
X
Q    Sequence 20 BP; 6 A; 2 C; 0 G; 12 T; 0 other;

 Query Match             0.9%;  Score 11.6;  DB 1;  Length 20;
 Best Local Similarity   77.8%;  Pred. No. 7.6e+02;
 Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1590 AAATATAAAAGTAAATAT 1607
             ||||| || |||||  ||
Db         18 AAATAAAATAGTAAGAAT 1

ESULT 911
BL51148
D    ABL51148 standard; DNA; 20 BP.
X
C    ABL51148;
X
T    27-JUN-2002  (first entry)
X
E    Human TNF inducible protein A20 antisense oligonucleotide SEQ ID:26.
X
W    Human; tumour necrosis factor inducible protein A20; phosphorothioate;
W    antisense modulation; antisense oligonucleotide; antiinflammatory;
W    cytostatic; antiviral; gene therapy; TNF inducible protein A20;
W    inflammatory disorder; viral infection; hyperproliferative disorder;
W    cancer; inflammation; tumour formation; ss.
X
S    Homo sapiens.
S    Synthetic.
X
E    Key             Location/Qualifiers
T    modified_base   1..20
T                    /*tag=  a
T                    /mod_base= OTHER
T                    /note= "2'-methoxyethyl (MOE) nucleotide wings and a
T                    deoxy gap with a phosphorothioate backbone"
T    modified_base   1..5
T                    /*tag=  b
T                    /mod_base= OTHER
T                    /note= "2'-O-methoxyethyl nucleotides"
T    modified_base   15..20
T                    /*tag=  c
T                    /mod_base= OTHER
T                    /note= "2'-O-methoxyethyl nucleotides"
X
N    WO200220545-A1.
X
O    14-MAR-2002.
X
F    07-SEP-2001; 2001WO-US28116.
X
R    08-SEP-2000; 2000US-0658687.
X
A    (ISIS-) ISIS PHARM INC.
X
I    Bennett CF,  Wyatt JR;
X
R    WPI; 2002-362238/39.
X
```

```
PT   New antisense compound useful for preventing or delaying infection,
PT   inflammation or tumor formation, hybridizes and inhibits a nucleic acid
PT   molecule encoding tumor necrosis factor inducible protein, A20  -
XX
PS   Claim 3; Page 91; 121pp; English.
XX
CC   The present invention describes a compound (I) of 8 - 50 nucleotides
CC   targeted to a nucleic acid molecule (II) encoding tumour necrosis factor
CC   (TNF) inducible protein, A20, and which specifically hybridises with and
CC   inhibits expression of A20, or a compound (Ia) of 8 - 50 nucleotides
CC   which specifically hybridises with an 8-nucleotide portion of an active
CC   site on (II). (I) have antiinflammatory, cytostatic and antiviral
CC   activities. (I) can be used as inhibitors of TNF inducible protein, A20.
CC   (I) is useful for inhibiting the expression of A20 in cells or tissues,
CC   and for treating an animal having a disease condition associated with
CC   A20, e.g. a inflammatory disorder, viral infection and hyperproliferative
CC   disorder e.g. cancer. (I) is also useful prophylactically, e.g. to
CC   prevent or delay infection, inflammation or tumour formation. (I) is
CC   also useful as therapeutic, diagnostic and research reagent, for
CC   distinguishing functions of various members of a biological pathway, and
CC   in antisense gene therapy. The present sequence represents an antisense
CC   oligonucleotide for human TNF inducible protein A20, from the present
CC   invention.
XX
SQ   Sequence 20 BP; 7 A; 2 C; 4 G; 7 T; 0 other;

  Query Match             0.9%;  Score 11.6;  DB 1;  Length 20;
  Best Local Similarity   77.8%;  Pred. No. 7.6e+02;
  Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1289 TTTATCTGAAATTTTAAT 1306
              ||| ||||||||   |||
Db          1 TTTGTCTGAAATGACAAT 18

RESULT 912
AAQ75568
ID   AAQ75568 standard; DNA; 20 BP.
XX
AC   AAQ75568;
XX
DT   04-AUG-1995  (first entry)
XX
DE   Reverse transcription primer used in cDNA analysis technique.
XX
KW   Analysis; gene expression; reverse transcription; primer; cDNA;
KW   aggregate; restriction enzyme; ss.
XX
OS   Synthetic.
XX
PN   JP06303997-A.
XX
PD   01-NOV-1994.
XX
PF   16-APR-1993;   93JP-0112515.
XX
PR   16-APR-1993;   93JP-0112515.
XX
PA   (NITE ) NIPPON TELEGRAPH & TELEPHONE CORP.
XX
DR   WPI; 1995-018287/03.
XX
PT   Analysis of cDNA and gene expression - by amplification of mRNA
PT   followed by digestion with restriction enzymes
XX
PS   Disclosure; Page 5; 11pp; Japanese.
XX
CC   A method for the analysis of cDNA comprises (a) preparing an
CC   aggregate of double-stranded cDNAs by using an aggregate of mRNAs
CC   and a plural type of labelled reverse transcription primers
CC   (GENESEQ files AAQ75547-Q75798) and using the aggregate of mRNAs as the
CC   template for each reverse transcription primer; (b) digesting each of
CC   the prepared aggregates of the double-stranded cDNAs with restriction
```

enzyme and; (c) electrophoresing the digested aggregate of cDNAs in seperate lanes. The method can be used to analyse gene expression rapidly and easily.

Sequence 20 BP; 1 A; 0 C; 1 G; 18 T; 0 other;

```
Query Match             0.9%;  Score 11.6;  DB 1;  Length 20;
Best Local Similarity   77.8%;  Pred. No. 7.6e+02;
Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

      1563 TTTTTTTTACTGTTTCTG 1580
           ||||||||  | ||| ||
         1 TTTTTTTTTTTTTTTTTG 18
```

SULT 913
T47265/c
AAT47265 standard; RNA; 20 BP.

AAT47265;

27-AUG-1997 (first entry)

5' fragment #2 of alfalfa mosaic virus.

Capped RNA molecule; mRNA maturation; translation initiation; influenza; endonuclease aptamer; RNase; therapy; inhibitor; ss.

Synthetic.

Key	Location/Qualifiers
modified_base	1
	/*tag= a
	/mod_base= 7-methylguanosine
modified_base	2
	/*tag= b
	/mod_base= triphosphorylated
modified_base	3
	/*tag= c
	/mod_base= 2'-O-methyluridine

WO9640159-A1.

19-DEC-1996.

03-JUN-1996; 96WO-US08394.

07-JUN-1995; 95US-0480068.

(MERI) MERCK & CO INC.

Benseler F, Cole JL, Kuo LC, Olsen DB;

WPI; 1997-051868/05.

Production of capped RNA or analogues - useful as substrates for influenza virus associated virally encoded endonuclease .

Claim 18; Page 12; 39pp; English.

AAT47264-T47280 represent capped RNA molecules produced by the method of the invention. The method of the invention is for producing capped RNA or RNA analogues. The method comprises reacting a RNA or analogue oligonucleotide with a phosphate addition agent to form a RNA or analogue mono-, di- or triphosphate, which is then capped. The presence of the cap is important for mRNA maturation, initiation of translation, and protects the mRNA against various RNases present in the cell. The capped RNA or analogue is an influenza endonuclease aptamer, useful for treating or preventing an influenza infection in an animal. The synthetic capped RNA are substrates for virally encoded endonuclease associated with influenza virus. The short non-extendible (due to their length or because of the modification of the 3' end of the oligo) RNA molecules are potent inhibitors of the cleavage of capped RNA by influenza endonuclease. They may be used to investigate viral and cellular mechanisms of transcription/translation, or mRNA maturation.

Sequence 20 BP; 3 A; 1 C; 2 G; 14 U; 0 other;

```
Query Match             0.9%;  Score 11.6;  DB 1;  Length 20;
Best Local Similarity   77.8%;  Pred. No. 7.6e+02;
Matches   14;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1589 GAAATATAAAAGTAAATA 1606
              ||||  ||||| |||| |
Db         20 GAAAATTAAAAATAAAAA 3
```

RESULT 914
AAV67374
ID AAV67374 standard; DNA; 21 BP.
AC AAV67374;
DT 21-DEC-1998 (first entry)
DE Nucleotide fragment containing polymorphic site, WI-5865 (i).
KW ss; polymorphic site; nucleic acid analysis; diagnosis; monitoring; cancer; inflammation; heart disease; CNS disease.
OS Homo sapiens.
PN WO9838846-A2.
PD 11-SEP-1998.
PF 06-MAR-1998; 98WO-US04571.
PR 28-MAR-1997; 97US-0042125.
PR 07-MAR-1997; 97US-0813159.
PA (AFFY-) AFFYMETRIX INC.
PI Berno A, Chee M, Fan J, Lipshutz RJ;
DR WPI; 1998-495419/42.
PT New nucleic acid segments containing polymorphic sites, or complements and methods of detecting a nucleic acid - for general use including diagnosis and monitoring of diseases
PS Claim 1; Page 9; 42pp; English.
CC New nucleic acid segment comprising one of the 10 - 100 bp sequences given in the specification (sequences of a polymorphic site), or the complement of the segment and a method of analysing a nucleic acid comprising determining the base occupying the polymorphic site of the polymorphic fragment sequences are disclosed in the specification. The information obtained from nucleic acid analysis by the method described is useful in diagnosis or monitoring of diseases like cancer, inflammation, heart disease, CNS diseases, and susceptibility to infection by microorganisms. In addition, the nucleic acid segments are useful in manufacturing medication in the treatment of prophylaxis of diseases, and also the use of the DNA segments as pharmaceutical.
SQ Sequence 21 BP; 13 A; 2 C; 0 G; 5 T; 1 other;

```
Query Match             0.9%;  Score 11.6;  DB 1;  Length 21;
Best Local Similarity   70.0%;  Pred. No. 7.8e+02;
Matches   14;  Conservative    1;  Mismatches    5;  Indels    0;  Gaps    0;

Qy        613 TCTACAAAAAACAACAAATA 632
              ||  |||| : ||||||||
Db          1 TATCAAAAATWAAACAAATA 20
```

ESULT 915
AQ20077
) AAQ20077 standard; DNA; 21 BP.
(
: AAQ20077;
(
: 25-MAR-2003 (updated)
: 24-MAR-1992 (first entry)
(
: HIV-1 DNA probe (gag region).
(
: Ethylene glycol; reagent; spacer; polymer; primer; probe; ss.
(
: Synthetic.
(
: EP462644-A.
(
) 27-DEC-1991.
(
: 10-JUN-1991; 91EP-0201420.
(
: 18-JUN-1990; 90US-0539774.
(
\ (EAST) EASTMAN KODAK CO.
\ (CLIN-) CLINICAL DIAGNOSTIC SYSTEMS INC.
\ (JOHJ) JOHNSON & JOHNSON CLINICAL DIAGNOSTICS INC.
K
I Sutton RC, Danielson SJ, Findlay JB, Oakes FT, Oenick MDB;
I Ponticello IS, Warren HC;
K
R WPI; 1992-001022/01.
X
T Insoluble particles of copolymer with reactive surface carboxy
T gps. - derived from monomers with long spacer between carboxy and
T unsaturated site, covalently attached to biological cpd.
X
S Example 12; Page 23; 53pp; English.
X
C The 5' end comprises an ethylene glycol spacer which has been
C attached according to US-A-4914210. The sequence is complementary
C to a portion of HIV-1 DNA in the gag region. The oligonucleotide was
C covalently bound to polymeric particles and used in nucleic assays
C to detect HIV-1 DNA, beta-globin DNA or both.
C Primers used in the amplification of HIV-1 and beta-globin DNA are
C represented in Q2078-81.
C See also AAQ20075-95.
C (Updated on 25-MAR-2003 to correct PA field.)
X
Q Sequence 21 BP; 13 A; 0 C; 2 G; 6 T; 0 other;

  Query Match   0.9%; Score 11.6; DB 1; Length 21;
  Best Local Similarity   77.8%; Pred. No. 7.8e+02;
  Matches   14; Conservative   0; Mismatches   4; Indels   0; Gaps   0;

)y   1590 AAATATAAAAGTAAATAT 1607
              ||||| || ||||| ||
)b   4 AAATAAAATAGTAAGAAT 21

ESULT 916
AAQ75643
:D AAQ75643 standard; DNA; 21 BP.
:X
\C AAQ75643;
:X
)T 04-AUG-1995 (first entry)
:X
)E Reverse transcription primer used in cDNA analysis technique.
:X
:W Analysis; gene expression; reverse transcription; primer; cDNA;
:W aggregate; restriction enzyme; ss.
:X
)S Synthetic.

XX
PN JP06303997-A.
XX
PD 01-NOV-1994.
XX
PF 16-APR-1993; 93JP-0112515.
XX
PR 16-APR-1993; 93JP-0112515.
XX
PA (NITE) NIPPON TELEGRAPH & TELEPHONE CORP.
XX
DR WPI; 1995-018287/03.
XX
PT Analysis of cDNA and gene expression - by amplification of mRNA
PT followed by digestion with restriction enzymes
XX
PS Disclosure; Page 6; 11pp; Japanese.
XX
CC A method for the analysis of cDNA comprises (a) preparing an
CC aggregate of double-stranded cDNAs by using an aggregate of mRNAs
CC and a plural type of labelled reverse transcription primers
CC (GENESEQ files AAQ75547-Q75798) and using the aggregate of mRNAs as the
CC template for each reverse transcription primer; (b) digesting each of
CC the prepared aggregates of the double-stranded cDNAs with restriction
CC enzyme and; (c) electrophoresing the digested aggregate of cDNAs in
CC seperate lanes. The method can be used to analyse gene expression
CC rapidly and easily.
XX
SQ Sequence 21 BP; 1 A; 0 C; 2 G; 18 T; 0 other;

  Query Match   0.9%; Score 11.6; DB 1; Length 21;
  Best Local Similarity   77.8%; Pred. No. 7.8e+02;
  Matches   14; Conservative   0; Mismatches   4; Indels   0; Gaps   0;

Qy   1563 TTTTTTTTACTGTTTCTG 1580
              |||||||| | ||| ||
Db   1 TTTTTTTTTTTTTTTTTG 18

RESULT 917
AAV91422
ID AAV91422 standard; RNA; 17 BP.
XX
AC AAV91422;
XX
DT 18-FEB-1999 (first entry)
XX
DE Human C-raf target site nucleotide position 2967.
XX
KW Human; c-raf; A-raf; B-raf; hammerhead ribozyme; hairpin ribozyme;
KW target; substrate; catalyst; modulation; expression; Raf gene;
KW delivery; screening; identification; synthesis; deprotection;
KW purification; cancer; inflammation; psoriasis; non-hepatic ascites;
KW infection; genetic drift; restenosis; rheumatoid arthritis; ss.
XX
OS Homo sapiens.
XX
PN WO9850530-A2.
XX
PD 12-NOV-1998.
XX
PF 05-MAY-1998; 98WO-US09249.
XX
PR 19-DEC-1997; 97US-0068212.
PR 09-MAY-1997; 97US-0046059.
PR 09-JUN-1997; 97US-0049002.
PR 03-JUL-1997; 97US-0051718.
PR 22-AUG-1997; 97US-0056808.
PR 02-OCT-1997; 97US-0061321.
PR 02-OCT-1997; 97US-0061324.
PR 05-NOV-1997; 97US-0064866.
XX
PA (RIBO-) RIBOZYME PHARM INC.

Beaudry A, Beigelman L, Bellon L, Burgin A, Jarvis T; Karpeisky A, Kisich K, Matulic-Adamic J, McSwiggen JA; Parry T, Reynolds M, Sweedler D, Thompson J, Workman CT;

WPI; 1999-009494/01.

Identifying new catalytic nucleic acid that modulates selected processes - especially ribozymes that cleave Raf RNA for treating cancer, restenosis, and also new ribozymes and modified nucleoside triphosphates used as antiviral agents and synthons

Claim 177; Page 154; 259pp; English.

A method has been developed for the identification of a nucleic acid capable of modulating a process in a biological system. The method comprises: (a) introducing into the system a random library of nucleic acid catalysts (NAC) having a substrate binding domain (SBD), comprising a random sequence, and a catalytic domain (CD); and (b) identifying NAC in systems where modulation has occurred and/or determining the sequence of at least part of the SBDs in such systems. Nucleic acid molecules with endonuclease activity and catalytic activity, from the present invention, are used to modulate gene expression in plant and mammalian cells and to cleave target nucleic acid, particularly for treating systemic diseases caused by specific RNA, e.g. cancer, inflammation, psoriasis, non-hepatic ascites and infection. They may also be used to detect genetic drift and mutations in diseased cells and to determine c-raf RNA. Specifically NACs with RNA-cleaving activity that modulate expression of the Raf gene, are used to treat cancer, restenosis, psoriasis or rheumatoid arthritis, or generally any condition associated with the level of c-raf. Introduction of sugar/phosphate modifications increases stability against nuclease and activity. AAV90922 to AAV93877 represent NACs that can be used in the method, specifically for modulating the expression of a Raf gene.

Sequence 17 BP; 12 A; 0 C; 0 G; 5 U; 0 other;

```
Query Match             0.9%;  Score 11.4;  DB 1;  Length 17;
Best Local Similarity   61.5%;  Pred. No. 7.6e+02;
Matches    8;  Conservative    4;  Mismatches    1;  Indels    0;  Gaps    0;

       1002 ATAACATAAATTA 1014
            |:|| |:|||::|
          2 AUAAAAUAAAUUA 14
```

SULT 918
X70035/c
AAX70035 standard; RNA; 17 BP.

AAX70035;

28-JUL-1999 (first entry)

Human flt1 VEGF receptor hammerhead ribozyme substrate #1330.

Vascular endothelial growth factor receptor; VEGF receptor; flt-1; flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage; tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease; fms-like tyrosine kinase 1; kinase insert domain containing receptor; foetal liver kinase 1; ss.

Homo sapiens.

WO9715662-A2.

01-MAY-1997.

25-OCT-1996; 96WO-US17480.

11-JAN-1996; 96US-0584040.
26-OCT-1995; 95US-0005974.

PA (CHIR) CHIRON CORP.
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Escobedo J, McSwiggen J, Pavco P, Stinchcomb D;
XX
DR WPI; 1997-259017/23.
XX
PT Nucleic acid molecule modulating VEGF receptor(s) gene expression or
PT mRNA stability - useful for treating e.g. tumour angiogenesis,
PT psoriasis, rheumatoid arthritis, etc., in a human patient
XX
PS Claim 4; Page 86; 218pp; English.
XX
CC The present invention describes nucleic acid molecules which modulate
CC the synthesis, expression and/or stability of a mRNA encoding 1 or more
CC receptors of vascular endothelial growth factor (VEGF). A patient
CC (preferably human) having a condition associated with the level of the
CC fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
CC receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
CC angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
CC be treated by administering the nucleic acid molecule or the expression
CC vector to the patient. AAX67275 to AAX75752 represent specific examples
CC of mucleic acid molecules from the present invention.
XX
SQ Sequence 17 BP; 9 A; 2 C; 0 G; 6 U; 0 other;

```
  Query Match             0.9%;  Score 11.4;  DB 1;  Length 17;
  Best Local Similarity   92.3%;  Pred. No. 7.6e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        522 TAAATTTGAATTT 534
              ||||||||| |||
Db         16 TAAATTTGAGTTT 4
```

RESULT 919
AAA21376/c
ID AAA21376 standard; RNA; 17 BP.
XX
AC AAA21376;
XX
DT 19-JUN-2000 (first entry)
XX
DE Integrin alpha 6 subunit substrate sequence SEQ ID NO:4602.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX
PR 27-MAR-1998; 98US-0079678.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -

XX
SC Claim 55; Page 204; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC and AAA19155 to AAA19222 represent their corresponding target sequences;
CC AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC AAA21596 to AAA21688 represent their corresponding target sequences;
CC AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC AAA23422 represent their corresponding target sequences. The ribozymes of
CC the invention are used for modulating the synthesis, expression and/or
CC stability of an mRNA encoding angiogenic factor, especially ARNT,
CC integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
Q Sequence 17 BP; 6 A; 1 C; 1 G; 9 U; 0 other;

Query Match 0.9%; Score 11.4; DB 1; Length 17;
Best Local Similarity 92.3%; Pred. No. 7.6e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

y 1617 AAAATATAATTTG 1629
|||||||| ||||
b 13 AAAATATATTTTG 1

ESULT 920
AS09117
D AAS09117 standard; DNA; 20 BP.
X
C AAS09117;
X
T 26-SEP-2001 (first entry)
X
E Human MEKK2 antisense oligonucleotide 113923.
X
W Human; mitogen-activated protein kinase kinase kinase 2; MAP; MEKK2;
W MEK kinase 2; MAP/ERK kinase kinase 2; immunological disorder;
W inflammatory disorder; hyperproliferative disorder; cancer; antisense;
W phosphorothioate; ss.
X
S Homo sapiens.
X
H Key Location/Qualifiers
T modified_base 1..20
T /*tag= a
T /mod_base= "OTHER"
T /note= "OTHER= phosphorothioate internucleotide linkages.
T Some bases especially bases 1-5 and bases 16-20
T are 2'-methoxyethyl (2'-MOE) bases, bases 6-15
T are 2'-deoxynucleotides and all cytidine bases
T are 5'-methylcytidines"
X
N WO200152863-A1.
X
D 26-JUL-2001.
X
F 16-JAN-2001; 2001WO-US01361.
X
PR 20-JAN-2000; 2000US-0488744.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Monia BP, Gaarde WA, Ward DT, Freier SM, Wyatt JR;
XX
DR WPI; 2001-442246/47.
XX
PT Antisense compound 8 to 30 nucleobases in length targeted to a nucleic
PT acid molecule encoding MEKK2, useful for the treatment of an
PT immunological,inflammatory of hyperproliferative disorder -
XX
PS Example 15; Page 80; 105pp; English.
XX
CC The present sequence for human MEKK2 antisense oligonucleotide 113923
CC is 1 of various novel human mitogen-activated protein (MAP)
CC kinase kinase kinase 2 (MEKK2, also known as MEK kinase 2 and
CC MAP/ERK kinase kinase 2) antisense oligonucleotides (AAS09045-AAS09122)
CC which specifically hybridise with and inhibit the expression of MEKK2.
CC The antisense oligonucleotides can be used in a composition to modulate
CC the expression of MEKK2 (AAU03598). The antisense oligonucleotides are
CC useful for inhibiting the expression of MEKK2 in the treatment of
CC immunological disorders, inflammatory disorders and hyperproliferative
CC disorders e.g. cancer.
XX
SQ Sequence 20 BP; 11 A; 3 C; 2 G; 4 T; 0 other;

Query Match 0.9%; Score 11.4; DB 1; Length 20;
Best Local Similarity 92.3%; Pred. No. 8.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 410 TATCCAAGAATCA 422
|| ||||||||||
Db 6 TAACCAAGAATCA 18

RESULT 921
AAQ30406/c
ID AAQ30406 standard; DNA; 21 BP.
XX
AC AAQ30406;
XX
DT 25-MAR-2003 (updated)
DT 07-DEC-1992 (first entry)
XX
DE Oligomer IL2R503 for forming triplex with HUMIL2 receptor target duplex.
XX
KW Human interleukin- 2 receptor gene; HUMIL2R8; herpes simplex; AIDS;
KW modified; HIV; RSV; HPV; malignancy; hepatitis; inflammation; ss.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT modified_base 1
FT /*tag= a
FT /mod_base= OTHER
FT /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT modified_base 2
FT /*tag= b
FT /mod_base= OTHER
FT /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT modified_base 5
FT /*tag= c
FT /mod_base= OTHER
FT /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT modified_base 6
FT /*tag= d
FT /mod_base= OTHER
FT /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
FT modified_base 10
FT /*tag= e
FT /mod_base= OTHER
FT /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"

```
   modified_base   14
                   /*tag= f
                   /mod_base=  OTHER
                   /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
   modified_base   17
                   /*tag= g
                   /mod_base=  OTHER
                   /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
   modified_base   18
                   /*tag= h
                   /mod_base=  OTHER
                   /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"
   modified_base   21
                   /*tag= i
                   /mod_base=  OTHER
                   /note= "OTHER= N6 methyl-8-oxo 2' deoxyadenine"

   WO9209705-A1.

   11-JUN-1992.

   25-NOV-1991;   91WO-US08811.

   23-NOV-1990;   90US-0617907.
   18-JAN-1991;   91US-0643382.
   08-APR-1991;   91US-0683420.
   17-APR-1991;   91US-0686544.
   17-APR-1991;   91US-0686546.
   17-APR-1991;   91US-0686547.
   27-SEP-1991;   91US-0766733.

   (GILE-) GILEAD SCI INC.

   Froehler B,  Krawczyk S,  Matteucci MD,  Milligan J;

   WPI; 1992-217083/26.

   New oligomers contg. modified bases - which form a triplex with
   G-C doublet in a DNA duplex, for treating and diagnosing HIV,
   hepatitis, herpes, malignancy and inflammation

   Claim 12; Page 71; 77pp; English.

   The synthetic oligomer is capable of forming a triplex at
   physiological pH with a purine rich target sequence by coupling
   into the major groove of the duplex.  The specific target sequence
   of this oligomer is the human interleukin-2 receptor gene exon 8
   target and flanks beginning at nucleotide 1114 contg. a purine rich
   sequence concd. on one strand of the duplex.  The oligomer, and others
   like it are useful in diagnosis and therapy of diseases characterised
   by specific DNA duplex targets, e.g. HPV; HER; HIV, hepatitis B, herpes,
   malignant tumours and inflammation. The triple helices form under mild
   conditions thus assays may be carried out without subjecting the test
   specimen to harsh conditions.
   See also AAQ25452-25501 and AAQ30226-448.
   (Updated on 25-MAR-2003 to correct PN field.)

   Sequence 21 BP; 9 A; 0 C; 0 G; 12 T; 0 other;

Query Match             0.9%;  Score 11.4;  DB 1;  Length 21;
Best Local Similarity   71.4%;  Pred. No. 8.3e+02;
Matches   15;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

       997 TCATCATAACATAAATTATTT 1017
           | ||  |  | ||||||| ||
        21 TAATTAATAAATAAATTAATT 1


SULT 922
Z26565/c
   AAZ26565 standard; DNA; 21 BP.

   AAZ26565;

XX
DT   30-NOV-1999  (first entry)
XX
DE   Human polymorphic region 754.
XX
KW   Polymorphism; human; inhibitor; cancer; treatment; cell growth; LOH;
KW   cell viability; loss of heterozygosity; precancerous condition; ASI;
KW   allele specific inhibitor; somatic cell; diagnosis; prevention;
KW   atherosclerotic plaque; premalignant metaplastic lesion; endometriosis;
KW   dysplastic lesion; benign tumour; polycystic kidney disease; transplant;
KW   graft versus host disease; malignant cell removal; bone marrow; ss.
XX
OS   Homo sapiens.
XX
PN   WO9841648-A2.
XX
PD   24-SEP-1998.
XX
PF   19-MAR-1998;   98WO-US05419.
XX
PR   20-MAR-1997;   97US-0041057.
XX
PA   (VARI-) VARIAGENICS INC.
XX
PI   Housman D,  Ledley FD,  Stanton VP;
XX
DR   WPI; 1998-521232/44.
XX
PT   Identifying target genes for allele-specific drugs - used for
PT   diagnosis, prevention and treatment of, e.g. cancers, atherosclerotic
PT   plaque, dysplastic lesions, endometriosis or graft versus host disease
XX
PS   Disclosure; Figure 7; 605pp; English.
XX
CC   This invention describes a novel method for identifying an inhibitor
CC   potentially useful for treatment of cancer, where the inhibitor is
CC   active on a gene vital for cell growth or viability, and where the gene
CC   is subject to loss of heterozygosity (LOH) in a cancer. The inhibitor is
CC   used for preventing the development of cancer in a patient having a
CC   precancerous condition, by administering to the patient a first allele
CC   specific inhibitor (ASI) targeted to an allele of a first essential gene
CC   present in cells of the precancerous condition, where the normal somatic
CC   cells of the patient are heterozygous for the first gene, the inhibitor
CC   is active on at least one but less than all allelic forms of the gene
CC   present in a population and targets only one allelic form present in the
CC   normal somatic cells, and the first gene. The products and methods can
CC   be used in the diagnosis, prevention and treatment of LOH disorders,
CC   e.g. cancers, atherosclerotic plaques, premalignant metaplastic or
CC   dysplastic lesions, benign tumours, endometriosis, polycystic kidney
CC   disease, and graft versus host disease. The method can also be used to
CC   remove malignant cells from bone marrow transplants. AAZ25812-Z26825
CC   represent human polymorphic sites described in the method of the
CC   invention.
XX
SQ   Sequence 21 BP; 8 A; 1 C; 0 G; 12 T; 0 other;

  Query Match             0.9%;  Score 11.4;  DB 1;  Length 21;
  Best Local Similarity   71.4%;  Pred. No. 8.3e+02;
  Matches   15;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

Qy       1200 TTAGATTAAACAAACAAACAA 1220
              |||  ||||| | | ||| ||
Db         21 TTATGTTAAAAATATAAATAA 1


RESULT 923
AAA74329
ID   AAA74329 standard; DNA; 16 BP.
XX
AC   AAA74329;
XX
DT   29-NOV-2000  (first entry)
XX
```

```
:E   Loblolly pine SSR repeat of locus RIPPT67.
:X
:W   Loblolly pine; Simple Sequence Repeat; SSR;
:W   microsatellite DNA repeat; genetic marker; mapping; inheritance study;
:W   population genetics study; plant breeding programme; ss.
:X
:S   Pinus taeda.
:X
:N   WO200042210-A2.
:X
:D   20-JUL-2000.
:X
:F   06-JAN-2000; 2000WO-US00325.
:X
:R   15-JAN-1999;   99US-0232884.
:R   19-JAN-1999;   99US-0232785.
:X
:A   (INTO ) INT PAPER CO.
:A   (ECHT/) ECHT C S.
:A   (NELS/) NELSON C D.
:A   (USDA ) US SEC OF AGRIC.
:X
:I   Echt CS,  Nelson CD;
:X
:R   WPI; 2000-482836/42.
:X
:T   Polynucleotide having simple sequence repeat useful as markers in
:T   plants for genetic characterization e.g. genetic mapping study, an
:T   inheritance study of a commercially important trait in a plant breeding
:T   program  -
:X
:S   Examples; Page 49; 57pp; English.
:X
:C   The present invention relates to loblolly pine polynucleotides with one
:C   or more Simple Sequence Repeats (SSRs) (see AAA74205-A74322). The
:C   present sequence is one such SSR repeat. SSRs are also known as
:C   microsatellite DNA repeats. The SSRs are useful as genetic markers for
:C   genetic mapping, population genetics studies and inheritance studies in
:C   various plant breeding programmes.
:X
:Q   Sequence 16 BP; 12 A; 0 C; 0 G; 4 T; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 16;
  Best Local Similarity   81.2%;  Pred. No. 7.9e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

)y       1590 AAATATAAAAGTAAAT 1605
              ||||| | || |||||
)b          1 AAATAAATAAATAAAT 16


:ESULT 924
:AA74330
:D   AAA74330 standard; DNA; 16 BP.
:X
:C   AAA74330;
:X
:T   29-NOV-2000  (first entry)
:X
:E   Loblolly pine SSR repeat of locus RIPPT69.
:X
:W   Loblolly pine; Simple Sequence Repeat; SSR;
:W   microsatellite DNA repeat; genetic marker; mapping; inheritance study;
:W   population genetics study; plant breeding programme; ss.
:X
:S   Pinus taeda.
:X
:N   WO200042210-A2.
:X
:D   20-JUL-2000.
:X
:F   06-JAN-2000; 2000WO-US00325.
:X
```

```
PR   15-JAN-1999;   99US-0232884.
PR   19-JAN-1999;   99US-0232785.
XX
PA   (INTO ) INT PAPER CO.
PA   (ECHT/) ECHT C S.
PA   (NELS/) NELSON C D.
PA   (USDA ) US SEC OF AGRIC.
XX
PI   Echt CS,  Nelson CD;
XX
DR   WPI; 2000-482836/42.
XX
PT   Polynucleotide having simple sequence repeat useful as markers in
PT   plants for genetic characterization e.g. genetic mapping study, an
PT   inheritance study of a commercially important trait in a plant breeding
PT   program  -
XX
PS   Examples; Page 49; 57pp; English.
XX
CC   The present invention relates to loblolly pine polynucleotides with one
CC   or more Simple Sequence Repeats (SSRs) (see AAA74205-A74322). The
CC   present sequence is one such SSR repeat. SSRs are also known as
CC   microsatellite DNA repeats. The SSRs are useful as genetic markers for
CC   genetic mapping, population genetics studies and inheritance studies in
CC   various plant breeding programmes.
XX
SQ   Sequence 16 BP; 12 A; 0 C; 0 G; 4 T; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 16;
  Best Local Similarity   81.2%;  Pred. No. 7.9e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1590 AAATATAAAAGTAAAT 1605
              ||||| | || |||||
Db          1 AAATAAATAAATAAAT 16


RESULT 925
AAT40329/c
ID   AAT40329 standard; DNA; 16 BP.
XX
AC   AAT40329;
XX
DT   05-DEC-1996  (first entry)
XX
DE   Improved cleavage group I intron primer 1.
XX
KW   Wild type; self-splicing group I intron; large ribosomal RNA precursor;
KW   Tetrahymena thermophila; catalysis; enzymatic RNA; food product;
KW   anti-viral agent; mutation; personal care product; cleaning agent; ss.
XX
OS   Synthetic.
XX
PN   WO9531551-A1.
XX
PD   23-NOV-1995.
XX
PF   26-APR-1995;   95WO-US05141.
XX
PR   01-JUL-1994;   94US-0270180.
PR   13-MAY-1994;   94US-0242402.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Joyce GF;
XX
DR   WPI; 1996-010936/01.
XX
PT   Enzymatic RNA molecules having one or more point mutation(s) -
PT   improve the enzymatic performance of the molecules.
XX
PS   Example 1; Page 98; 209pp; English.
XX
```

The sequences given in AAT40327-30 represent sequences that were used to optimise DNA cleavage activity of the enzymatic RNA molecule of the invention. The 3' potion of the substrate was transferred to the 3' terminal G of the ribozyme and amplification was performed. The product of the reaction was a molecule which contained the 3' portion of the substrate attached to the 3' end of the ribozyme. Selection occured when a primer was hybridised across the ligation junction and used to initiate cDNA synthesis. The primer does not bind to unreacted starting materials and thus led to selective amplification of the catalytically active RNA's. The self-splicing group I intron of the invention is based on the large ribosomal RNA precursor from Tetrahymena thermophila. The biological function of this molecule is to catalyse its own excision from precursor rRNA to produce mature rRNA. The Tetrahymena wild type sequence was used in the design of the enzymatic RNA molecules of the invention. A number of mutations are listed in the specification which improve the enzymatic properties of this molecule, e.g. G444A, G191U, U190A and A314G. The modified enzymatic molecules may be used as medical or pharmaceutical agents for use in anti-viral agents, food products, personal care products or cleaning agents.

Sequence 16 BP; 3 A; 1 C; 0 G; 12 T; 0 other;

```
Query Match              0.9%;  Score 11.2;  DB 1;  Length 16;
Best Local Similarity   81.2%;  Pred. No. 7.9e+02;
Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

       1589 GAAATATAAAAGTAAA 1604
            |||||| | || ||||
         16 GAAATAAATAAATAAA 1
```

SULT 926
AV09052/c
AAV09052 standard; DNA; 16 BP.

AAV09052;

25-JUN-1998 (first entry)

Primer 1 for tetrahymena ribozyme L-21.

Tetrahymena ribozyme; group I intron; amide end hydrolysis; peptidase; protease; antiviral agent; gene regulator; immunogenic virus; vaccine; mutation detection; PCR primer; ss.

Synthetic.
Tetrahymena sp.

WO9802583-A1.

22-JAN-1998.

16-JUL-1997; 97WO-US12394.

17-JUL-1996; 96US-0682423.

(SCRI) SCRIPPS RES INST.

Joyce GF;

WPI; 1998-110627/10.

Catalytic RNA for site-specific cleavage of nucleic acid or hydrolysis of amide bonds - and ribozyme amidase intermediates, useful e.g. as peptidase(s), antiviral agents and gene regulators

Example 1; Page 92; 215pp; English.

This sequence is a primer for a wild type tetrahymena ribozyme L-21 form. The amplified sequence is an example of a catalytic RNA (I) of the invention, which catalyses site-specific cleavage of nucleic acid under physiological conditions includes a sequence derived from a group I intron. Similar catalytic RNAs (II) which catalyse hydrolysis of amide

CC ends are useful as peptidases and proteases, e.g. in wound debridement,
CC clot dissolution, in detergents or as a meat tenderiser. (I) cleave
CC single- and (partly) double-stranded nucleic acids in vitro or in vivo,
CC and are potentially useful as antiviral agents and gene regulators; also
CC to generate defective but still immunogenic viruses (for vaccines);
CC diagnostically to detect mutations in nucleic acid or to identify nucleic
CC acid binding agents; to modulate/terminate reactions initiated by DNA
CC primers; to generate truncated transcripts from DNA; to modulate
CC therapeutic/diagnostic processes using antisense sequences; in DNA
CC fingerprinting and for vector construction. (I) and (II) are produced by
CC in vitro evolution processes that provide better catalytic performance;
CC broader active temperature and pH ranges; new enzymatic activities or
CC specificities; altered recognition sites or co-factor requirement.
XX
SQ Sequence 16 BP; 3 A; 1 C; 0 G; 12 T; 0 other;

```
  Query Match              0.9%;  Score 11.2;  DB 1;  Length 16;
  Best Local Similarity   81.2%;  Pred. No. 7.9e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1589 GAAATATAAAAGTAAA 1604
              |||||| | || ||||
Db         16 GAAATAAATAAATAAA 1
```

RESULT 927
AAA22698/c
ID AAA22698 standard; RNA; 17 BP.
XX
AC AAA22698;
XX
DT 19-JUN-2000 (first entry)
XX
DE Integrin subunit beta 3 substrate sequence SEQ ID NO:5924.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX
PR 27-MAR-1998; 98US-0079678.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -
XX
PS Claim 54; Page 236; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to

```
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 5 A; 0 C; 0 G; 12 U; 0 other;

 Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
 Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
 Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1206 TAAACAAACAAACAAT 1221
                ||||  |||  |||  |||
Db         17 TAAATAAATAAATAAT 2


RESULT 928
AAA22699/c
ID   AAA22699 standard; RNA; 17 BP.
XX
AC   AAA22699;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin subunit beta 3 substrate sequence SEQ ID NO:5925.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors  -
XX
PS   Claim 54; Page 237; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 4 A; 0 C; 0 G; 13 U; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1591 AATATAAAAGTAAATA 1606
                ||||  |  ||  ||||||
Db         17 AATAAATAAATAAATA 2


RESULT 929
AAA22701/c
ID   AAA22701 standard; RNA; 17 BP.
XX
AC   AAA22701;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin subunit beta 3 substrate sequence SEQ ID NO:5927.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors  -
```

Claim 54; Page 237; 305pp; English.

The present invention describes enzymatic nucleic acid molecules with RNA cleaving activity, which specifically cleave RNA encoded by an aryl hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3 gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT, and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086 and AAA19155 to AAA19222 represent their corresponding target sequences; AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and AAA21596 to AAA21688 represent their corresponding target sequences; AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to AAA23422 represent their corresponding target sequences. The ribozymes of the invention are used for modulating the synthesis, expression and/or stability of an mRNA encoding angiogenic factor, especially ARNT, integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are especially used to treat cancer, diabetic retinopathy, age related macular degeneration (ARMD), inflammation, and arthritis, as well as neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris, angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome, and other syndromes and diseases related to the levels of ARNT, Tie-2, integrin subunit alpha-6, or integrin subunit beta-3.

Sequence 17 BP; 5 A; 0 C; 0 G; 12 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 81.2%; Pred. No. 8.1e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
      1590 AAATATAAAAGTAAAT 1605
           ||||| | || |||||
        16 AAATAAATAAATAAAT 1
```

SULT 930
A22702/c
AAA22702 standard; RNA; 17 BP.

AAA22702;

19-JUN-2000 (first entry)

Integrin subunit beta 3 substrate sequence SEQ ID NO:5928.

Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis; integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme; hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic; ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD; dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis; age related macular degeneration; inflammation; neovascular glaucoma; myopic degeneration; psoriasis; verruca vulgaris; angiofibroma; tuberous sclerosis; pot-wine stain; Sturge Weber syndrome; Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.

Homo sapiens.

WO9950403-A2.

07-OCT-1999.

24-MAR-1999; 99WO-US06507.

27-MAR-1998; 98US-0079678.

(RIBO-) RIBOZYME PHARM INC.

Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;

XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -
XX
PS Claim 54; Page 237; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC and AAA19155 to AAA19222 represent their corresponding target sequences;
CC AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC AAA21596 to AAA21688 represent their corresponding target sequences;
CC AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC AAA23422 represent their corresponding target sequences. The ribozymes of
CC the invention are used for modulating the synthesis, expression and/or
CC stability of an mRNA encoding angiogenic factor, especially ARNT,
CC integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ Sequence 17 BP; 4 A; 0 C; 0 G; 13 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 81.2%; Pred. No. 8.1e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
Qy       1591 AATATAAAAGTAAATA 1606
              |||| | || ||||||
Db         17 AATAAATAAATAAATA 2
```

RESULT 931
AAA22704/c
ID AAA22704 standard; RNA; 17 BP.
XX
AC AAA22704;
XX
DT 19-JUN-2000 (first entry)
XX
DE Integrin subunit beta 3 substrate sequence SEQ ID NO:5930.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX

```
2   27-MAR-1998;   98US-0079678.
(
4   (RIBO-) RIBOZYME PHARM INC.
6
[   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
[
2   WPI; 1999-591315/50.
4
7   Novel ribozymes for modulating the synthesis, expression and/or
7   stability of an mRNA encoding an angiogenic factors  -
[
3   Claim 54; Page 237; 305pp; English.
5
1   The present invention describes enzymatic nucleic acid molecules with
1   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
1   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
1   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
1   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
1   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
1   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
1   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
1   and AAA19155 to AAA19222 represent their corresponding target sequences;
1   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
1   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
1   AAA21596 to AAA21688 represent their corresponding target sequences;
1   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
1   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
1   AAA23422 represent their corresponding target sequences. The ribozymes of
1   the invention are used for modulating the synthesis, expression and/or
1   stability of an mRNA encoding angiogenic factor, especially ARNT,
1   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
1   especially used to treat cancer, diabetic retinopathy, age related
1   macular degeneration (ARMD), inflammation, and arthritis, as well as
1   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
1   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
1   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
1   and other syndromes and diseases related to the levels of ARNT, Tie-2,
1   integrin subunit alpha-6, or integrin subunit beta-3.
K
Q   Sequence 17 BP; 5 A; 0 C; 0 G; 12 U; 0 other;

 Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
 Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
 Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

y       1590 AAATATAAAAGTAAAT 1605
             ||||| | || |||||
b         16 AAATAAATAAATAAAT 1


ESULT 932
AA22705/c
D   AAA22705 standard; RNA; 17 BP.
X
C   AAA22705;
X
T   19-JUN-2000  (first entry)
X
E   Integrin subunit beta 3 substrate sequence SEQ ID NO:5931.
X
W   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
W   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
W   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
W   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
W   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
W   age related macular degeneration; inflammation; neovascular glaucoma;
W   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
W   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
W   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
X
S   Homo sapiens.
X
N   WO9950403-A2.
```

```
XX
PD  07-OCT-1999.
XX
PF  24-MAR-1999;  99WO-US06507.
XX
PR  27-MAR-1998;  98US-0079678.
XX
PA  (RIBO-) RIBOZYME PHARM INC.
XX
PI  Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR  WPI; 1999-591315/50.
XX
PT  Novel ribozymes for modulating the synthesis, expression and/or
PT  stability of an mRNA encoding an angiogenic factors  -
XX
PS  Claim 54; Page 237; 305pp; English.
XX
CC  The present invention describes enzymatic nucleic acid molecules with
CC  RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC  hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC  gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC  AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC  and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC  corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC  AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC  and AAA19155 to AAA19222 represent their corresponding target sequences;
CC  AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC  sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC  AAA21596 to AAA21688 represent their corresponding target sequences;
CC  AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC  for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC  AAA23422 represent their corresponding target sequences. The ribozymes of
CC  the invention are used for modulating the synthesis, expression and/or
CC  stability of an mRNA encoding angiogenic factor, especially ARNT,
CC  integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC  especially used to treat cancer, diabetic retinopathy, age related
CC  macular degeneration (ARMD), inflammation, and arthritis, as well as
CC  neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC  angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC  syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC  and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC  integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ  Sequence 17 BP; 4 A; 0 C; 0 G; 13 U; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy      1591 AATATAAAAGTAAATA 1606
             |||| | || ||||||
Db        17 AATAAATAAATAAATA 2


RESULT 933
AAD49640/c
ID  AAD49640 standard; mRNA; 17 BP.
XX
AC  AAD49640;
XX
DT  24-MAR-2003  (first entry)
XX
DE  Human adenylate uridylate-rich element (ARE) motif mRNA #2.
XX
KW  Amyloidosis; haemophilia; Alzheimer's disease; atherosclerosis; cancer;
KW  gigantism; dwarfism; hypothyroidism; hyperthyroidism; cystic fibrosis;
KW  autoimmune disorder; aging; inflammation; diabetes; obesity; anorectic;
KW  neurodegenerative disorder; Parkinson's disease; gene therapy; virucide;
KW  haemostatic; antibacterial; nootropic; neuroprotective; cytostatic;
KW  fungicide; human; adenylate uridylate-rich element; ARE; ss.
XX
OS  Homo sapiens.
```

WO200283953-A1.

24-OCT-2002.

11-APR-2002; 2002WO-US11757.

11-APR-2001; 2001US-282965P.

(PTCT-) PTC THERAPEUTICS INC.

Rando R, Welch E;

WPI; 2003-075561/07.

Identifying a test compound that binds to a target RNA molecule for treating or preventing amyloidosis, hemophilia, cancer, gigantism, diabetes, by contacting a detectably labeled target RNA molecule with a library of test compounds -

Disclosure; Page 18; 152pp; English.

The invention relates to a method for identifying a test compound that binds to a target RNA molecule, which comprises contacting a detectably labelled target RNA molecule with a library of test compounds under conditions that permit direct binding of the labelled target RNA to a member of the library of test compounds so that a detectably labeled target RNA:test compound complex is formed. The method is useful for screening libraries of compounds for those that are selectively bind to a pre-selected target RNA. The compounds are useful for inhibiting the formation of a specific bound RNA:host cell factor complexes in vivo. They are also useful for treating or preventing diseases associated with overproduction or decreased protein function, such as amyloidosis, haemophilia, Alzheimer's disease, atherosclerosis, cancer, gigantism, dwarfism, hypothyroidism, hyperthyroidism, autoimmune disorders, aging, inflammation, cystic fibrosis, diabetes, obesity, neurodegenerative disorders, Parkinson's disease or infections (bacterial, viral, fungal). The invention is also used in gene therapy. The present sequence is human adenylate uridylate-rich element (ARE) motif mRNA. This sequence is used to illustrate the method of the invention.

Sequence 17 BP; 5 A; 0 C; 0 G; 12 U; 0 other;

```
Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

       1590 AAATATAAAAGTAAAT 1605
            ||||| | || |||||
         16 AAATAAATAAATAAAT 1
```

SULT 934
L50229/c
AAL50229 standard; mRNA; 17 BP.

AAL50229;

13-FEB-2003 (first entry)

Human ARE-mRNA sequence #2.

ARE-mRNA; protein secretion inhibition; ARE-mRNA regulation; inflammation; arthritis; autoimmune disease; septic shock; blood clot; stroke; TNFalpha; tumour necrosis factor alpha; antiinflammatory; antiarthritic; antibacterial; immunosuppressive; cerebroprotective; antipyretic; immunomodulator; adenylate-uridylate rich element; ss.

Homo sapiens.

WO200283842-A2.

24-OCT-2002.

XX
PF 08-APR-2002; 2002WO-US10898.
XX
PR 10-APR-2001; 2001US-282974P.
XX
PA (MESS-) MESSAGE PHARM INC.
XX
PI Giordano T, Sturgess MA;
XX
DR WPI; 2003-046924/04.
XX
PT Modulating Adenylate-Uridylate Rich element-mRNA regulation involves
PT administering new amide compound that inhibits secretion of protein
PT encoded by ARE-mRNA, useful for treating inflammation, arthritis and
PT autoimmune diseases -
XX
PS Disclosure; Fig 5; 147pp; English.
XX
CC The present invention relates to a method of modulating the regulation of
CC an adenylate-uridylate rich element (ARE)-mRNA, which involves
CC administering new compounds that inhibits secretion of a protein encoded
CC by an ARE-mRNA. This can be used in the treatment of inflammation,
CC arthritis, autoimmune diseases, septic shock, blood clot, stroke, fever,
CC acute respiratory distress syndrome (ARDS) and cachexia. The present
CC sequence is an ARE-mRNA shown in the exemplification of the invention.
XX
SQ Sequence 17 BP; 5 A; 0 C; 0 G; 12 U; 0 other;

```
  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1590 AAATATAAAAGTAAAT 1605
              ||||| | || |||||
Db         16 AAATAAATAAATAAAT 1
```

RESULT 935
AAL53708/c
ID AAL53708 standard; RNA; 17 BP.
XX
AC AAL53708;
XX
DT 07-FEB-2003 (first entry)
XX
DE Adenylate Uridylate-rich element motif SEQ ID No 2.
XX
KW Target RNA; target RNA:support-attached test compound; flow cytometry;
KW mass spectrometry; high-throughput screening; RNA motif; ss.
XX
OS Homo sapiens.
XX
PN WO200283837-A1.
XX
PD 24-OCT-2002.
XX
PF 11-APR-2002; 2002WO-US11758.
XX
PR 11-APR-2001; 2001US-282966P.
XX
PA (PTCT-) PTC THERAPEUTICS INC.
XX
PI Almstead NG;
XX
DR WPI; 2003-075534/07.
XX
PT Identifying a test compound that binds to a target RNA molecule by
PT separating the detectably labeled target RNA:support-attached test
PT compound complex from uncomplexed target RNA molecules and test
PT compounds by flow cytometry -
XX
PS Disclosure; Page 16; 131pp; English.
XX

CC The invention relates to a novel method for identifying a test compound
CC that binds to a target RNA molecule comprising separating the detectably
CC labeled target RNA:support-attached test compound complex from
CC uncomplexed target RNA molecules and test compounds. The separating
CC process is carried out by flow cytometry and determining a structure of
CC the type of test compound of the RNA:support-attached test compound
CC complex by mass spectrometry. The method is useful for high-throughput
CC screening of libraries of compounds to identify pharmaceutical leads.
CC This polynucleotide sequence represents one of the target RNA motifs/
CC regions of the invention.
XX
SQ Sequence 17 BP; 5 A; 0 C; 0 G; 12 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 81.2%; Pred. No. 8.1e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1590 AAATATAAAAGTAAAT 1605
||||| | || |||||
Db 16 AAATAAATAAATAAAT 1

RESULT 936
AAA22707/c
ID AAA22707 standard; RNA; 17 BP.
XX
AC AAA22707;
XX
DT 19-JUN-2000 (first entry)
XX
DE Integrin subunit beta 3 substrate sequence SEQ ID NO:5933.
XX
KW Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW age related macular degeneration; inflammation; neovascular glaucoma;
KW myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS Homo sapiens.
XX
PN WO9950403-A2.
XX
PD 07-OCT-1999.
XX
PF 24-MAR-1999; 99WO-US06507.
XX
PR 27-MAR-1998; 98US-0079678.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;
XX
DR WPI; 1999-591315/50.
XX
PT Novel ribozymes for modulating the synthesis, expression and/or
PT stability of an mRNA encoding an angiogenic factors -
XX
PS Claim 54; Page 237; 305pp; English.
XX
CC The present invention describes enzymatic nucleic acid molecules with
CC RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC and AAA19155 to AAA19222 represent their corresponding target sequences;
CC AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC AAA21596 to AAA21688 represent their corresponding target sequences;
CC AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC AAA23422 represent their corresponding target sequences. The ribozymes of
CC the invention are used for modulating the synthesis, expression and/or
CC stability of an mRNA encoding angiogenic factor, especially ARNT,
CC integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC especially used to treat cancer, diabetic retinopathy, age related
CC macular degeneration (ARMD), inflammation, and arthritis, as well as
CC neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ Sequence 17 BP; 4 A; 0 C; 0 G; 13 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 81.2%; Pred. No. 8.1e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1590 AAATATAAAAGTAAAT 1605
||||| | || |||||
Db 16 AAATAAATAAATAAAT 1

RESULT 937
ABT37900
ID ABT37900 standard; DNA; 17 BP.
XX
AC ABT37900;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 3537.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -
XX
PS Disclosure; Page 447; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15
CC consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC sequence that hybridizes to them under highly stringent conditions, or
CC the complement of any of them, or the corresponding RNA. The novel
CC isolated nucleic acids of the invention are useful as probes and primers
CC for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC e.g. as one component of a gene chip, in vitro as (anti)sense reagents,

and for production of recombinant polypeptides. Any of the nucleic acids, polypeptides, vectors containing the nucleic acids, cells containing the vector or antibodies directed against the polypeptides are useful for preparation of pharmaceuticals for prevention and/or treatment of viral diseases that are characterised by development of tumours or cell degeneration, specifically cancer but also Alzheimer's disease and schizophrenia. Analysis of the expression of the 17 mer nucleic acids in patient samples is useful for diagnosis and/or prognosis of these diseases. The polypeptides can also be used to generate antibodies, and both the polypeptide and antibodies are useful as components of protein chips. The nucleic acid sequences of the invention can be used in gene therapy. This polynucleotide sequence represents a tumour suppression related human fukutin oligonucleotide of the invention.

Sequence 17 BP; 7 A; 1 C; 1 G; 8 T; 0 other;

```
Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

       1160 ATTAAATGATGTTTTA 1175
            || |||| || |||||
          2 ATCAAATTATATTTTA 17
```

SULT 938
V96639/c
AAV96639 standard; RNA; 17 BP.

AAV96639;

01-MAR-1999 (first entry)

Potato citrate synthase target sequence position 1333.

Solanidine; glucosyltransferase; potato; citrate synthase; target; hammerhead ribozyme; hairpin ribozyme; alkaloid biosynthesis; flower formation; cleavage; solanaceous plant; ss.

Solanum tuberosum.

WO9832843-A2.

30-JUL-1998.

14-JAN-1998; 98WO-US00738.

24-NOV-1997; 97US-0979416.
28-JAN-1997; 97US-0036545.
28-JAN-1997; 97US-0036599.

(RIBO-) RIBOZYME PHARM INC.

McSwiggen JA, Zwick MG;

WPI; 1998-427939/36.

New enzymatic nucleic acid(s) - useful for, e.g. reducing alkaloid biosynthesis or regulating flowering

Claim 53; Page 56; 79pp; English.

The present invention describes enzymatic nucleic acid molecules with RNA-cleaving activity (e.g. ribozymes) which are capable of modulating the expression of plant genes: (i) involved in biosynthesis of alkaloids; or (ii) involved in flower formation. AAV95982 to AAV96334, and AAV96335 to AAV96354 represent potato solanidine glucosyltransferase hammerhead and hairpin ribozymes, respectively. AAV95629 to AAV95981, and AAV96355 to AAV96734 represent potato solanidine glucosyltransferase target sequences. AAV96773 to AAV97170, and AAV97171 to AAV97195 represent potato citrate synthase hammerhead and hairpin ribozymes, respectively. AAV96735 to AAV96772, and AAV97196 to AAV97220 represent potato citrate synthase target sequences. Ribozymes of the present invention can be used to inhibit the synthesis of toxic alkaloids in solanaceous plants, particularly potato but also tomato, pepper, aubergine and ditura or to inhibit flowering in potato, lettuce, spinach, cabbage, brussel sprouts, arugula, kale, collards, chard, beet, turnip, sweet potato and turf grass. Also the ribozymes can be used for RNA manipulation in the same way that restriction endonucleases are for DNA, as well as to examine genetic drift and mutations in plants and to detect specific RNA. The ribozymes can be targeted to specific genes or to consensus sequences within a family of related genes, and being catalytic need to be present at only very low concentrations.

Sequence 17 BP; 6 A; 1 C; 3 G; 7 U; 0 other;

```
  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1245 TTCAGATAAACAACAA 1260
              ||||| ||||| | ||
Db         17 TTCAGTTAAACCATAA 2
```

RESULT 939
AAA21468
AAA21468 standard; RNA; 17 BP.

AAA21468;

19-JUN-2000 (first entry)

Integrin alpha 6 subunit substrate sequence SEQ ID NO:4694.

Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis; integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme; hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic; ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD; dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis; age related macular degeneration; inflammation; neovascular glaucoma; myopic degeneration; psoriasis; verruca vulgaris; angiofibroma; tuberous sclerosis; pot-wine stain; Sturge Weber syndrome; Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.

Homo sapiens.

WO9950403-A2.

07-OCT-1999.

24-MAR-1999; 99WO-US06507.

27-MAR-1998; 98US-0079678.

(RIBO-) RIBOZYME PHARM INC.

Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;

WPI; 1999-591315/50.

Novel ribozymes for modulating the synthesis, expression and/or stability of an mRNA encoding an angiogenic factors -

Claim 55; Page 210; 305pp; English.

The present invention describes enzymatic nucleic acid molecules with RNA cleaving activity, which specifically cleave RNA encoded by an aryl hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3 gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT, and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086 and AAA19155 to AAA19222 represent their corresponding target sequences; AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme

```
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 9 A; 0 C; 0 G; 8 U; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   43.8%;  Pred. No. 8.1e+02;
  Matches    7;  Conservative    6;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        628 AAATAATTTTTGAATA 643
              |||:|| ::::  |:|
Db          1 AAAUAAAUUUUUUAUA 16


RESULT 940
AAA22904
ID   AAA22904 standard; RNA; 17 BP.
XX
AC   AAA22904;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin subunit beta 3 substrate sequence SEQ ID NO:6130.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors  -
XX
PS   Claim 54; Page 249; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 12 A; 0 C; 0 G; 5 U; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   62.5%;  Pred. No. 8.1e+02;
  Matches   10;  Conservative    3;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        620 AAAACAACAAATAATT 635
              |||  || |||:||::
Db          1 AAAUAAAUAAAAUAAUU 16


RESULT 941
AAV96640/c
ID   AAV96640 standard; RNA; 17 BP.
XX
AC   AAV96640;
XX
DT   01-MAR-1999  (first entry)
XX
DE   Potato citrate synthase target sequence position 1334.
XX
KW   Solanidine; glucosyltransferase; potato; citrate synthase; target;
KW   hammerhead ribozyme; hairpin ribozyme; alkaloid biosynthesis;
KW   flower formation; cleavage; solanaceous plant; ss.
XX
OS   Solanum tuberosum.
XX
PN   WO9832843-A2.
XX
PD   30-JUL-1998.
XX
PF   14-JAN-1998;   98WO-US00738.
XX
PR   24-NOV-1997;   97US-0979416.
PR   28-JAN-1997;   97US-0036545.
PR   28-JAN-1997;   97US-0036599.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   McSwiggen JA,  Zwick MG;
XX
DR   WPI; 1998-427939/36.
XX
PT   New enzymatic nucleic acid(s) - useful for, e.g. reducing alkaloid
PT   biosynthesis or regulating flowering
XX
PS   Claim 53; Page 56; 79pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA-cleaving activity (e.g. ribozymes) which are capable of modulating
CC   the expression of plant genes: (i) involved in biosynthesis of
CC   alkaloids; or (ii) involved in flower formation. AAV95982 to AAV96334,
```

and AAV96335 to AAV96354 represent potato solanidine glucosyltransferase hammerhead and hairpin ribozymes, respectively. AAV95629 to AAV95981, and AAV96355 to AAV96734 represent potato solanidine glucosyltransferase target sequences. AAV96773 to AAV97170, and AAV97171 to AAV97195 represent potato citrate synthase hammerhead and hairpin ribozymes, respectively. AAV96735 to AAV96772, and AAV97196 to AAV97220 represent potato citrate synthase target sequences. Ribozymes of the present invention can be used to inhibit the synthesis of toxic alkaloids in solanaceous plants, particularly potato but also tomato, pepper, aubergine and ditura or to inhibit flowering in potato, lettuce, spinach, cabbage, brussel sprouts, arugula, kale, collards, chard, beet, turnip, sweet potato and turf grass. Also the ribozymes can be used for RNA manipulation in the same way that restriction endonucleases are for DNA, as well as to examine genetic drift and mutations in plants and to detect specific RNA. The ribozymes can be targeted to specific genes or to consensus sequences within a family of related genes, and being catalytic need to be present at only very low concentrations.

Sequence 17 BP; 5 A; 1 C; 4 G; 7 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 81.2%; Pred. No. 8.1e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
      1245 TTCAGATAAACAACAA 1260
           ||||| ||||| | ||
        16 TTCAGTTAAACCATAA 1

SULT 942
A22898
```

AAA22898 standard; RNA; 17 BP.

AAA22898;

19-JUN-2000 (first entry)

Integrin subunit beta 3 substrate sequence SEQ ID NO:6124.

Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis; integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme; hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic; ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD; dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis; age related macular degeneration; inflammation; neovascular glaucoma; myopic degeneration; psoriasis; verruca vulgaris; angiofibroma; tuberous sclerosis; pot-wine stain; Sturge Weber syndrome; Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.

Homo sapiens.

WO9950403-A2.

07-OCT-1999.

24-MAR-1999; 99WO-US06507.

27-MAR-1998; 98US-0079678.

(RIBO-) RIBOZYME PHARM INC.

Pavco PA, Roberts E, Jarvis T, Coeshott C, McSwiggen JA;

WPI; 1999-591315/50.

Novel ribozymes for modulating the synthesis, expression and/or stability of an mRNA encoding an angiogenic factors -

Claim 54; Page 249; 305pp; English.

The present invention describes enzymatic nucleic acid molecules with RNA cleaving activity, which specifically cleave RNA encoded by an aryl hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3 gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT, and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086 and AAA19155 to AAA19222 represent their corresponding target sequences; AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and AAA21596 to AAA21688 represent their corresponding target sequences; AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to AAA23422 represent their corresponding target sequences. The ribozymes of the invention are used for modulating the synthesis, expression and/or stability of an mRNA encoding angiogenic factor, especially ARNT, integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are especially used to treat cancer, diabetic retinopathy, age related macular degeneration (ARMD), inflammation, and arthritis, as well as neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris, angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome, and other syndromes and diseases related to the levels of ARNT, Tie-2, integrin subunit alpha-6, or integrin subunit beta-3.

SQ Sequence 17 BP; 13 A; 0 C; 0 G; 4 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 62.5%; Pred. No. 8.1e+02;
Matches 10; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

```
Qy       1251 TAAACAACAAATAATT 1266
              :||| || |||:|| :
Db          1 UAAAAAAUAAAUAAAU 16
```

RESULT 943
AAA25454
ID AAA25454 standard; DNA; 17 BP.
AC AAA25454;
DT 19-JUL-2000 (first entry)
DE Oestrogen receptor hammerhead ribozyme target sequence SEQ ID NO:1952.
KW Oestrogen receptor; c-raf; k-ras; bcl-2; ribozyme; cleavage; hammerhead ribozyme; hairpin ribozyme; antisense oligonucleotide; gene expression modification; cancer; phosphorothioate; endonuclease; anticancer; breast cancer; endometrium cancer; ss.
OS Homo sapiens.
PN WO9954459-A2.
PD 28-OCT-1999.
PF 19-APR-1999; 99WO-US08547.
PR 20-APR-1998; 98US-0082404.
PR 23-JUN-1998; 98US-0103636.
PA (RIBO-) RIBOZYME PHARM INC.
PI Thompson JD, Beigelman L, McSwiggen JA, Karpeisky A, Bellon L;
PI Reynolds M, Zwick M, Jarvis T, Woolf T, Haeberli P;
PI Matulic-Adamic J;
DR WPI; 2000-013248/01.
PT New nucleic acids that interact, and optionally cleave, target sequences, used to treat cancer -
PS Claim 77; Page 79; 148pp; English.

```
C   The present invention describes nucleic acids (A) that interact stably
C   with a target sequence and contain at least one phosphoro(di)thioate
C   link, having endonuclease activity. (A), and more generally any
C   catalytic nucleic acid (A') that modulates expression of the oestrogen
C   receptor gene, are used to treat cancer (particularly of breast or
C   endometrium), in vivo or by transforming cells ex vivo and implanting
C   treated cells, or for other conditions associated with levels of
C   oestrogen receptor. Because of the high selectivity for targeted RNA, (A)
C   can also be used to correlate inhibition of gene expression with
C   alterations in phenotype, particularly for identification of therapeutic
C   targets, and as research reagents (for RNA, in the same way that
C   restriction endonucleases are used with DNA). The combination of
C   modifications in (A) improves resistance to nucleases, binding affinity
C   and/or activity. AAA23503 to AAA24747 represent oestrogen receptor
C   hammerhead ribozyme sequences, and AAA24748 to AAA25992 represent their
C   corresponding target sequences. AAA25993 to AAA26105 represent oestrogen
C   receptor hairpin ribozyme sequences, and AAA26107 to AAA26218 represent
C   their corresponding target sequences. AAA26219 to AAA26271 represent
C   other ribozyme sequences and antisense oligonucleotides used in the
C   exemplification of the present invention.
X
Q   Sequence 17 BP; 1 A; 0 C; 1 G; 15 T; 0 other;

 Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
 Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
 Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1040 TTTATTATTTATGTAT 1055
              ||| || ||| |||||
Db          2 TTTTTTTTTTTTGTAT 17


RESULT 944
ABK56852/c
ID   ABK56852 standard; RNA; 17 BP.
XX
AC   ABK56852;
XX
DT   02-JUL-2002  (first entry)
XX
DE   Human CLCA1 gene enzymatic nucleic acid #1223.
XX
KW   Human; chloride channel calcium activated 1; CLCA1; ss; antiasthmatic;
KW   antiinflammatory; chronic obstructive pulmonary disease; COPD; asthma;
KW   chronic bronchitis; cystic fibrosis; obstructive bowel syndrome;
KW   oxygen therapy; bronchodilator; corticosteroid; vaccination; mucokinetic;
KW   acetylcysteine.
XX
OS   Homo sapiens.
XX
PN   WO200211674-A2.
XX
PD   14-FEB-2002.
XX
PF   09-AUG-2001; 2001WO-US24970.
XX
PR   09-AUG-2000; 2000US-224383P.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
PA   (SYNT ) SYNTEX USA LLC.
PA   (THOM/) THOMPSON J.
XX
PI   Thompson J,  McSwiggen J,  McKenzie T,  Ayers D,  Szymkowski DE;
PI   Grupe A;
XX
DR   WPI; 2002-217145/27.
XX
PT   Enzymatic polynucleotide that down regulates expression of chloride
PT   channel calcium activated gene, useful for treating Chronic obstructive
PT   pulmonary disease (COPD), chronic bronchitis and asthma  -
XX
PS   Claim 4; Page 84; 152pp; English.
XX
CC   The invention relates to enzymatic nucleic acid molecules that down
CC   regulate expression of chloride channel calcium activated 1 (CLCA1) genes
CC   by cleaving RNA derived from the genes. The nucleic acid sequences are
CC   useful as pharmaceutical agents for treating conditions such as chronic
CC   obstructive pulmonary disease (COPD), chronic bronchitis, asthma, cystic
CC   fibrosis, obstructive bowel syndrome and any other diseases or conditions
CC   that are related to or will respond to the levels of CLCA1 in a cell or
CC   tissue. The sequences are useful for reducing CLCA1 activity in a cell,
CC   hence, are useful for treatment of a patient having a condition
CC   associated with the level of CLCA1, where the invention further comprises
CC   the use of one or more therapies under conditions suitable for the
CC   treatment, for example, oxygen therapy, bronchodilators, corticosteroids,
CC   antibacterials, vaccinations, acetylcysteine and mucokinetic agents. The
CC   nucleic acids of the invention are also used as diagnostic tools to
CC   examine genetic drift and mutations within diseased cells or to detect
CC   the presence of CLCA1 RNA in a cell. This sequence represents an
CC   enzymatic nucleic acid molecule of the invention.
XX
SQ   Sequence 17 BP; 8 A; 4 C; 2 G; 3 U; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1283 TTATTGTTTATCTGAA 1298
              || ||||| | |||||
Db         17 TTGTTGTTCAGCTGAA 2


RESULT 945
ABZ60733/c
ID   ABZ60733 standard; RNA; 17 BP.
XX
AC   ABZ60733;
XX
DT   21-MAR-2003  (first entry)
XX
DE   Human K-Ras DNAzyme substrate #845.
XX
KW   Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras;
KW   enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV;
KW   anti-rheumatic; cancer; AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO200297114-A2.
XX
PD   05-DEC-2002.
XX
PF   29-MAY-2002; 2002WO-US16840.
XX
PR   29-MAY-2001; 2001US-294140P.
PR   06-JUN-2001; 2001US-296249P.
PR   10-SEP-2001; 2001US-318471P.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Mcswiggen J;
XX
DR   WPI; 2003-140484/13.
XX
PT   Novel short interfering RNA and enzymatic nucleic acid useful for
PT   treating cancer, modulates the expression of a nucleic acid encoding
PT   HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences  -
XX
PS   Claim 58; Page 101; 185pp; English.
XX
CC   The invention relates to a novel short interfering RNA (siRNA) nucleic
CC   acid molecule or an enzymatic nucleic acid molecule, that modulates
CC   expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras,
CC   human immunodeficiency virus (HIV) or a component of HIV. The nucleic
CC   acid molecule of the invention has cytostatic, anti-HIV, and
CC   anti-rheumatic activity. The nucleic acid molecules are useful for
```

reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic acids are also useful for treating breast, ovarian, colorectal, lung, prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS. The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531, ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target sequences for the human ribozymes of the invention.

Sequence 17 BP; 9 A; 0 C; 1 G; 7 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 81.2%; Pred. No. 8.1e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
Qy        623 ACAACAAATAATTTTT 638
              | ||| | ||||||||
Db         16 AAAACTATTAATTTTT 1
```

SULT 946
Z61098/c
ABZ61098 standard; RNA; 17 BP.

ABZ61098;

21-MAR-2003 (first entry)

Human K-Ras DNAzyme substrate #1210.

Human; ribozyme; short interfering RNA; siRNA; HER2; K-Ras; enzymatic nucleic acid; H-Ras; N-Ras; HIV; cytostatic; anti-HIV; anti-rheumatic; cancer; AIDS; ss.

Homo sapiens.

WO200297114-A2.

05-DEC-2002.

29-MAY-2002; 2002WO-US16840.

29-MAY-2001; 2001US-294140P.
06-JUN-2001; 2001US-296249P.
10-SEP-2001; 2001US-318471P.

(RIBO-) RIBOZYME PHARM INC.

Mcswiggen J;

WPI; 2003-140484/13.

Novel short interfering RNA and enzymatic nucleic acid useful for treating cancer, modulates the expression of a nucleic acid encoding HER2, K-Ras, H-Ras, N-Ras, and human deficiency virus sequences -

Claim 58; Page 108; 185pp; English.

The invention relates to a novel short interfering RNA (siRNA) nucleic acid molecule or an enzymatic nucleic acid molecule, that modulates expression of a nucleic acid molecule encoding HER2, K-Ras, H-Ras, N-Ras, human immunodeficiency virus (HIV) or a component of HIV. The nucleic acid molecule of the invention has cytostatic, anti-HIV, and anti-rheumatic activity. The nucleic acid molecules are useful for reducing HER2, K-Ras, H-Ras, and HIV activity in a cell. The nucleic acids are also useful for treating breast, ovarian, colorectal, lung, prostate, bladder, or pancreatic cancer, and HIV infection, and AIDS. The sequences shown in ABZ59889 - ABZ62216, ABZ64544 - ABZ65531, ABZ66520 - ABZ66524, ABZ66530 - ABZ66585 represent substrate/target sequences for the human ribozymes of the invention.

Sequence 17 BP; 4 A; 2 C; 3 G; 8 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 81.2%; Pred. No. 8.1e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
Qy       1501 TGCATTTTTAAATACA 1516
              ||||| ||||||||
Db         17 TGCATGAATAAATACA 2
```

RESULT 947
AAX74782/c
ID AAX74782 standard; RNA; 17 BP.
XX
AC AAX74782;
XX
DT 28-JUL-1999 (first entry)
XX
DE Mouse flt-1 VEGF receptor hammerhead ribozyme substrate #310.
XX
KW Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
KW flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
KW tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
KW fms-like tyrosine kinase 1; kinase insert domain containing receptor;
KW foetal liver kinase 1; ss.
XX
OS Mus sp.
XX
PN WO9715662-A2.
XX
PD 01-MAY-1997.
XX
PF 25-OCT-1996; 96WO-US17480.
XX
PR 11-JAN-1996; 96US-0584040.
PR 26-OCT-1995; 95US-0005974.
XX
PA (CHIR) CHIRON CORP.
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Escobedo J, McSwiggen J, Pavco P, Stinchcomb D;
XX
DR WPI; 1997-259017/23.
XX
PT Nucleic acid molecule modulating VEGF receptor(s) gene expression or
PT mRNA stability - useful for treating e.g. tumour angiogenesis,
PT psoriasis, rheumatoid arthritis, etc., in a human patient
XX
PS Claim 4; Page 164; 218pp; English.
XX
CC The present invention describes nucleic acid molecules which modulate
CC the synthesis, expression and/or stability of a mRNA encoding 1 or more
CC receptors of vascular endothelial growth factor (VEGF). A patient
CC (preferably human) having a condition associated with the level of the
CC fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
CC receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
CC angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
CC be treated by administering the nucleic acid molecule or the expression
CC vector to the patient. AAX67275 to AAX75752 represent specific examples
CC of nucleic acid molecules from the present invention.
XX
SQ Sequence 17 BP; 11 A; 4 C; 1 G; 1 U; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 17;
Best Local Similarity 81.2%; Pred. No. 8.1e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
Qy        464 CTTCATGTATTGTGTG 479
              |||  |||||| ||||
Db         16 CTTGTTGTATTTTGTG 1
```

RESULT 948
AAX69088/c
ID AAX69088 standard; RNA; 17 BP.
XX

```
C   AAX69088;
K
T   28-JUL-1999  (first entry)
K
B   Human flt1 VEGF receptor hammerhead ribozyme substrate #383.
K
W   Vascular endothelial growth factor receptor; VEGF receptor; flt-1;
W   flk-1; KDR; hammerhead ribozyme; hairpin ribozyme; cleavage;
W   tumour angiogenesis; psoriasis; rheumatoid arthritis; ocular disease;
W   fms-like tyrosine kinase 1; kinase insert domain containing receptor;
W   foetal liver kinase 1; ss.
K
S   Homo sapiens.
K
W   WO9715662-A2.
K
D   01-MAY-1997.
K
F   25-OCT-1996;   96WO-US17480.
K
R   11-JAN-1996;   96US-0584040.
R   26-OCT-1995;   95US-0005974.
X
A   (CHIR ) CHIRON CORP.
A   (RIBO-) RIBOZYME PHARM INC.
X
I   Escobedo J,  McSwiggen J,  Pavco P,  Stinchcomb D;
X
R   WPI; 1997-259017/23.
X
T   Nucleic acid molecule modulating VEGF receptor(s) gene expression or
T   mRNA stability  - useful for treating e.g. tumour angiogenesis,
T   psoriasis, rheumatoid arthritis, etc., in a human patient
X
S   Claim 4; Page 58; 218pp; English.
X
C   The present invention describes nucleic acid molecules which modulate
C   the synthesis, expression and/or stability of a mRNA encoding 1 or more
C   receptors of vascular endothelial growth factor (VEGF). A patient
C   (preferably human) having a condition associated with the level of the
C   fms-like tyrosine kinase 1 (flt-1), kinase insert domain containing
C   receptor (KDR) and/or foetal liver kinase 1 (flk-1) (e.g. tumour
C   angiogenesis, ocular diseases, psoriasis and rheumatoid arthritis) can
C   be treated by administering the nucleic acid molecule or the expression
C   vector to the patient. AAX67275 to AAX75752 represent specific examples
C   of nucleic acid molecules from the present invention.
X
Q   Sequence 17 BP; 11 A; 4 C; 1 G; 1 U; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        464 CTTCATGTATTGTGTG 479
              ||| |||||| ||||
Db         16 CTTGTTGTATTTTGTG 1


RESULT 949
AAA21377/c
ID   AAA21377 standard; RNA; 17 BP.
XX
AC   AAA21377;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Integrin alpha 6 subunit substrate sequence SEQ ID NO:4603.
XX
KW   Human; aryl hydrocarbon nuclear transport; ARNT; TIE-2; angiogenesis;
KW   integrin alpha 6 subunit; integrin subunit beta 3; hairpin ribozyme;
KW   hammerhead ribozyme; angiogenic factor; cytostatic; antidiabetic;
KW   ophthalmologic; antiinflammatory; antiarthritic; antipsoriatic; ARMD;
KW   dermatological; RNA cleavage; cancer; diabetic retinopathy; arthritis;
KW   age related macular degeneration; inflammation; neovascular glaucoma;
KW   myopic degeneration; psoriasis; verruca vulgaris; angiofibroma;
KW   tuberous sclerosis; pot-wine stain; Sturge Weber syndrome;
KW   Kippel-Trenaunay-Weber syndrome; Osler-Weber-Rendu syndrome; ss.
XX
OS   Homo sapiens.
XX
PN   WO9950403-A2.
XX
PD   07-OCT-1999.
XX
PF   24-MAR-1999;   99WO-US06507.
XX
PR   27-MAR-1998;   98US-0079678.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Pavco PA,  Roberts E,  Jarvis T,  Coeshott C,  McSwiggen JA;
XX
DR   WPI; 1999-591315/50.
XX
PT   Novel ribozymes for modulating the synthesis, expression and/or
PT   stability of an mRNA encoding an angiogenic factors  -
XX
PS   Claim 55; Page 204; 305pp; English.
XX
CC   The present invention describes enzymatic nucleic acid molecules with
CC   RNA cleaving activity, which specifically cleave RNA encoded by an aryl
CC   hydrocarbon nuclear transporter (ARNT) gene, an integrin subunit beta 3
CC   gene, an integrin alpha 6 subunit gene, or a Tie-2 gene. AAA16775 to
CC   AAA17167 and AAA17561 to AAA17622 represent ribozyme sequences for ARNT,
CC   and AAA17168 to AAA17560 and AAA17623 to AAA17684 represent their
CC   corresponding target sequences; AAA17685 to AAA18385 and AAA19087 to
CC   AAA19154 represent ribozyme sequences for Tie-2, and AAA18386 to AAA19086
CC   and AAA19155 to AAA19222 represent their corresponding target sequences;
CC   AAA19223 to AAA20361 and AAA21501 to AAA21595 represent ribozyme
CC   sequences for integrin alpha 6 subunit, and AAA20362 to AAA21500 and
CC   AAA21596 to AAA21688 represent their corresponding target sequences;
CC   AAA21689 to AAA22475 and AAA23263 to AAA23342 represent ribozyme sequence
CC   for integrin subunit beta 3, and AAA22476 to AAA23262, AAA23343 to
CC   AAA23422 represent their corresponding target sequences. The ribozymes of
CC   the invention are used for modulating the synthesis, expression and/or
CC   stability of an mRNA encoding angiogenic factor, especially ARNT,
CC   integrin subunit beta-3, integrin subunit alpha-6, or Tie-2. They are
CC   especially used to treat cancer, diabetic retinopathy, age related
CC   macular degeneration (ARMD), inflammation, and arthritis, as well as
CC   neovascular glaucoma, myopic degeneration, psoriasis, verruca vulgaris,
CC   angiofibroma of tuberous sclerosis, pot-wine stains, Sturge Weber
CC   syndrome, Kippel-Trenaunay-Weber syndrome, Osler-Weber-Rendu syndrome,
CC   and other syndromes and diseases related to the levels of ARNT, Tie-2,
CC   integrin subunit alpha-6, or integrin subunit beta-3.
XX
SQ   Sequence 17 BP; 6 A; 1 C; 1 G; 9 U; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1251 TAAACAACAAATAATT 1266
              |||||| | ||| ||
Db         16 TAAACAAAATATATTT 1


RESULT 950
ABS74671/c
ID   ABS74671 standard; DNA; 17 BP.
XX
AC   ABS74671;
XX
DT   24-DEC-2002  (first entry)
XX
DE   Human PAPP-Ea associated 17-mer SEQ ID 197.
XX
```

PAPP-E; human; pregnancy associated plasma protein E; abortive;
contraceptive; gene therapy; vaccine; pregnancy; antenatal; diagnosis;
dysgenetic pregnancy; primer; ss.

Homo sapiens.

US2002102252-A1.

01-AUG-2002.

06-APR-2001; 2001US-0827998.

26-MAY-2000; 2000US-207456P.

(GUYY/) GU Y.
(SHAN/) SHANNON M E.

Gu Y, Shannon ME;

WPI; 2002-697817/75.

New isolated nucleic acid encoding an isoform of human pregnancy
associated plasma protein E, for preventing or aborting pregnancy -

Example 2; Page 101; 353pp; English.

This invention describes a novel isolated nucleic acid that encodes
one of three new isoforms of human pregnancy associated plasma protein E,
hPAPP-E. The products of the invention have abortive and contraceptive
activity and can be used for gene therapy or in a vaccine. The nucleic
acid, polypeptide encoded by it, or antibody to the polypeptide can be
used in pharmaceutical compositions or vaccines for preventing or
aborting pregnancy. PAPP-E is used in the antenatal diagnosis of
dysgenetic pregnancies. The nucleic acids are used as probes to assess
the level of PAPP-E isoform mRNA in chorionic villus samples, and the
antibodies can be used to assess the expression levels of PAPP-E isoform
proteins in chorionic villus samples, to diagnose dysgenetic pregnancies
antenatally. This sequence represents an oligomer used in scanning the
human PAPP-E genes described in the disclosure of the invention.

Sequence 17 BP; 7 A; 1 C; 1 G; 8 T; 0 other;

```
Query Match              0.9%;  Score 11.2;  DB 1;  Length 17;
Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1012 TTATTTTCAAGTGTAA 1027
              ||||||| || || ||
Db         17 TTATTTTAAAATGCAA 2
```

RESULT 951
ABS74672/c
ID ABS74672 standard; DNA; 17 BP.
XX
AC ABS74672;
XX
DT 24-DEC-2002 (first entry)
XX
DE Human PAPP-Ea associated 17-mer SEQ ID 198.
XX
KW PAPP-E; human; pregnancy associated plasma protein E; abortive;
KW contraceptive; gene therapy; vaccine; pregnancy; antenatal; diagnosis;
KW dysgenetic pregnancy; primer; ss.
XX
OS Homo sapiens.
XX
PN US2002102252-A1.
XX
PD 01-AUG-2002.
XX
PF 06-APR-2001; 2001US-0827998.
XX
PR 26-MAY-2000; 2000US-207456P.
XX
PA (GUYY/) GU Y.
PA (SHAN/) SHANNON M E.
XX
PI Gu Y, Shannon ME;
XX
DR WPI; 2002-697817/75.
XX
PT New isolated nucleic acid encoding an isoform of human pregnancy
PT associated plasma protein E, for preventing or aborting pregnancy -
XX
PS Example 2; Page 101; 353pp; English.
XX
CC This invention describes a novel isolated nucleic acid that encodes
CC one of three new isoforms of human pregnancy associated plasma protein E,
CC hPAPP-E. The products of the invention have abortive and contraceptive
CC activity and can be used for gene therapy or in a vaccine. The nucleic
CC acid, polypeptide encoded by it, or antibody to the polypeptide can be
CC used in pharmaceutical compositions or vaccines for preventing or
CC aborting pregnancy. PAPP-E is used in the antenatal diagnosis of
CC dysgenetic pregnancies. The nucleic acids are used as probes to assess
CC the level of PAPP-E isoform mRNA in chorionic villus samples, and the
CC antibodies can be used to assess the expression levels of PAPP-E isoform
CC proteins in chorionic villus samples, to diagnose dysgenetic pregnancies
CC antenatally. This sequence represents an oligomer used in scanning the
CC human PAPP-E genes described in the disclosure of the invention.
XX
SQ Sequence 17 BP; 7 A; 1 C; 2 G; 7 T; 0 other;

```
  Query Match              0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1012 TTATTTTCAAGTGTAA 1027
              ||||||| || || ||
Db         16 TTATTTTAAAATGCAA 1
```

RESULT 952
ABT36211/c
ID ABT36211 standard; DNA; 17 BP.
XX
AC ABT36211;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 1848.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB04208.
XX
PR 17-SEP-2001; 2001FR-0011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases
PT associated with tumors and cell degeneration, also related
PT polypeptides, antibodies and transfected cells -

```
X
S   Disclosure; Page 249; 720pp; French.
X
C   The invention relates to a novel isolated 17 mer nucleic acid sequence,
C   given in the specification, a sequence containing at least 15
C   consecutive nucleotides from the 17 mer sequence, a sequence with, after
C   optimal alignment, at least 80 % identity to the 17 mer sequence, a
C   sequence that hybridizes to them under highly stringent conditions, or
C   the complement of any of them, or the corresponding RNA. The novel
C   isolated nucleic acids of the invention are useful as probes and primers
C   for detecting, identifying, quantifying and/or amplifying a nucleic acid,
C   e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
C   and for production of recombinant polypeptides. Any of the nucleic acids,
C   polypeptides, vectors containing the nucleic acids, cells containing the
C   vector or antibodies directed against the polypeptides are useful for
C   preparation of pharmaceuticals for prevention and/or treatment of viral
C   diseases that are characterised by development of tumours or cell
C   degeneration, specifically cancer but also Alzheimer's disease and
C   schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
C   patient samples is useful for diagnosis and/or prognosis of these
C   diseases. The polypeptides can also be used to generate antibodies, and
C   both the polypeptide and antibodies are useful as components of protein
C   chips. The nucleic acid sequences of the invention can be used in gene
C   therapy. This polynucleotide sequence represents a tumour suppression
C   related human fukutin oligonucleotide of the invention.
X
Q   Sequence 17 BP; 5 A; 2 C; 6 G; 4 T; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        947 CTTACCTCACAGTGAT 962
              | ||| |||| |||||
Db         17 CCTACATCACTGTGAT 2


RESULT 953
ABT38326
ID  ABT38326 standard; DNA; 17 BP.
XX
AC  ABT38326;
XX
DT  12-JUN-2003  (first entry)
XX
DE  Tumour suppression related human fukutin oligo SEQ ID No 3963.
XX
KW  Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW  antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW  schizophrenia; protein chip; gene therapy; tumour suppression;
KW  human fukutin; ds.
XX
OS  Homo sapiens.
XX
PN  WO2003025175-A2.
XX
PD  27-MAR-2003.
XX
PF  17-SEP-2002; 2002WO-IB04208.
XX
PR  17-SEP-2001; 2001FR-0011978.
XX
PA  (MOLE-) MOLECULAR ENGINES LAB.
XX
PI  Telerman A,  Amson R,  Tuijnder M;
XX
DR  WPI; 2003-313353/30.
XX
PT  New isolated nucleic acid, useful for treating viral diseases
PT  associated with tumors and cell degeneration, also related
PT  polypeptides, antibodies and transfected cells  -
XX
PS  Disclosure; Page 497; 720pp; French.
XX
CC  The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC  given in the specification, a sequence containing at least 15
CC  consecutive nucleotides from the 17 mer sequence, a sequence with, after
CC  optimal alignment, at least 80 % identity to the 17 mer sequence, a
CC  sequence that hybridizes to them under highly stringent conditions, or
CC  the complement of any of them, or the corresponding RNA. The novel
CC  isolated nucleic acids of the invention are useful as probes and primers
CC  for detecting, identifying, quantifying and/or amplifying a nucleic acid,
CC  e.g. as one component of a gene chip, in vitro as (anti)sense reagents,
CC  and for production of recombinant polypeptides. Any of the nucleic acids,
CC  polypeptides, vectors containing the nucleic acids, cells containing the
CC  vector or antibodies directed against the polypeptides are useful for
CC  preparation of pharmaceuticals for prevention and/or treatment of viral
CC  diseases that are characterised by development of tumours or cell
CC  degeneration, specifically cancer but also Alzheimer's disease and
CC  schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC  patient samples is useful for diagnosis and/or prognosis of these
CC  diseases. The polypeptides can also be used to generate antibodies, and
CC  both the polypeptide and antibodies are useful as components of protein
CC  chips. The nucleic acid sequences of the invention can be used in gene
CC  therapy. This polynucleotide sequence represents a tumour suppression
CC  related human fukutin oligonucleotide of the invention.
XX
SQ  Sequence 17 BP; 8 A; 1 C; 1 G; 7 T; 0 other;

  Query Match             0.9%;  Score 11.2;  DB 1;  Length 17;
  Best Local Similarity   81.2%;  Pred. No. 8.1e+02;
  Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1613 ATTTAAAATATAATTT 1628
              || | ||||| |||||
Db          2 ATCTTAAATAAAATTT 17


RESULT 954
AAF79673
ID  AAF79673 standard; DNA; 18 BP.
XX
AC  AAF79673;
XX
DT  29-MAY-2001  (first entry)
XX
DE  Human Akt-3 antisense oligonucleotide, SEQ ID NO: 81.
XX
KW  Human; Akt-3; protein kinase; cytostatic; antiinflammatory; infection;
KW  antisense therapy; inflammation; tumour; ss.
XX
OS  Homo sapiens.
XX
PN  US6187586-B1.
XX
PD  13-FEB-2001.
XX
PF  29-DEC-1999;  99US-0474922.
XX
PR  29-DEC-1999;  99US-0474922.
XX
PA  (ISIS-) ISIS PHARM INC.
XX
PI  Monia BP,  Cowsert LM,  Roth RA;
XX
DR  WPI; 2001-264979/27.
XX
PT  New antisense compounds targeting nucleic acids encoding human Akt-3
PT  useful for treating a disease or condition associated with Akt-3
PT  expression, or in preventing or delaying inflammation or tumor
PT  formation  -
XX
PS  Claim 1; Column 40; 37pp; English.
XX
CC  The present sequence is one of a number of antisense compounds of up to
CC  30 nucleobases in length targeted to a nucleic acid encoding human Akt-3.
```

The antisense compounds are useful for inhibiting the expression of human Akt-3 in human cells or tissues. They are also useful for modulating the expression of Akt-3, and for treating a human or an animal suspected of having, or being prone to, a disease or condition associated with Akt-3 expression. The antisense compounds may also be used as research reagents, in kits and in diagnostics, e.g. to elucidate the function of a particular gene or to distinguish between functions of various members of a biological pathway; and as a prophylactic, e.g. to prevent or delay infection, inflammation or tumour formation.

Sequence 18 BP; 3 A; 3 C; 1 G; 11 T; 0 other;

```
Query Match             0.9%;  Score 11.2;  DB 1;  Length 18;
Best Local Similarity   81.2%;  Pred. No. 8.4e+02;
Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

      1555 TCTCCAAATTTTTTTT 1570
           ||||  ||||| ||||
         3 TCTCATAATTTCTTTT 18
```

SULT 955
X37761
AAX37761 standard; DNA; 18 BP.

AAX37761;

09-JUL-1999 (first entry)

Staphylococcus sp. detecting oligonucleotide fsq2s.

FemA; primer; identification; detection; therapy; infection; femB; amplification; genotyping; gram-positive bacteria; vaccine; ss.

Synthetic.
Staphylococcus sp.

WO9916780-A2.

08-APR-1999.

28-SEP-1998; 98WO-BE00141.

26-SEP-1997; 97EP-0870146.

(BENA-) BELGIAN MIN NAT DEFENCE.
(UYLO-) UNIV CATHOLIQUE LOUVAIN.

Gala J, Vannuffel P;

WPI; 1999-287521/24.

New Staphylococcus-specific oligonucleotides

Claim 5; Page 8; 48pp; English.

This invention describes novel Staphylococcus-specific oligonucleotides based on the consensus femA nucleotide sequence which are used to develop products for the identification, detection and therapy of infections. The oligonucleotides can be used for the genetic amplification, the identification and/or quantification of various femA sequences which are specific to known or unknown Staphylococci species. Since the femA sequence is similar to the femB sequence, the oligonucleotides can also be used for the molecular genotyping of femB genes of different Staphylococci species or other gram-positive bacteria. The femA nucleic acids can also be used in therapeutic applications. They can also be used to identify inhibitors, e.g. antibodies or antisense oligonucleotides, for blocking expression of the femA nucleotide sequences. They can also be used for producing vaccines against Staphylococci infections.

Sequence 18 BP; 12 A; 1 C; 3 G; 2 T; 0 other;

```
Query Match             0.9%;  Score 11.2;  DB 1;  Length 18;
Best Local Similarity   81.2%;  Pred. No. 8.4e+02;
Matches   13;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        619 AAAAACAACAAATAAT 634
              |||||  ||||| |||
Db          1 AAAAAGTACAAAAAAT 16
```

RESULT 956
ABK34044/c
ID ABK34044 standard; DNA; 18 BP.
XX
AC ABK34044;
XX
DT 18-JUN-2002 (first entry)
XX
DE Human NF1 probe #2.
XX
KW Human; ss; astrocytoma; cytostatic; staging; cysteine methylation; CpG; bisulphite; brain tissue; MALDI; ESI; electron spray mass spectrometry; matrix assisted laser desorption/ionization mass spectrometry; probe.
XX
OS Homo sapiens.
XX
PN WO200202808-A2.
XX
PD 10-JAN-2002.
XX
PF 02-JUL-2001; 2001WO-EP07538.
XX
PR 30-JUN-2000; 2000DE-1032529.
PR 01-SEP-2000; 2000DE-1043826.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2002-171649/22.
XX
PT Novel chemically modified genomic DNA sequences, useful in the
PT characterisation, classification, differentiation, grading, staging,
PT treatment and/or diagnosis of astrocytomas or predisposition to
PT astrocytomas -
XX
PS Example 2; Page 18; 37pp; English.
XX
CC The invention relates to a nucleic acid comprising a sequence (I) of at
CC least 18 bases in length of a segment of chemically pre-treated genomic
CC DNA which has any one of the sequences of (ABK33919-ABK34032) or its
CC complement. Also included are an oligonucleotide or peptide nucleic
CC acid (or set thereof) of at least 9 nucleotides which hybridises to (I),
CC primers for (I), probes for detecting cytosine methylation or single-
CC nucleotide polymorphisms (SNP) in (I), an array of oligomers
CC or peptide nucleic acids for analysing diseases associated with the
CC methylation states of the CpG dinucleotides of (I). The array is useful
CC for determining genetic and/or epigenetic parameters, classification,
CC differentiation, grading, staging, treatment and/or diagnosis of
CC astrocytomas, or the predisposition to astrocytomas by analysing cytosine
CC methylations, involves obtaining a biological sample containing genomic
CC DNA, extracting the genomic DNA, converting cytosine bases which are
CC unmethylated at the 5-position, in the genomic DNA sample, to uracil or
CC another base which is dissimilar to cytosine in terms of hybridisation
CC behaviour, by chemical treatment and amplifying chemically pre-treated
CC genomic DNA fragments using the array and a polymerase, where the
CC amplificates carry a detectable label. The method further involves
CC identifying methylation status of one or more cytosine positions, and
CC analysing methylation status of the cytosine positions by reference to
CC one or more data sets. The genomic DNA is chemically treated by using a
CC bisulphite, hydrogen sulphite or disulphite. The amplification
CC step amplifies DNA which is of particular interest in astrocytoma or
CC brain tissue, based on the specific genomic methylation status of brain
CC tissues, as opposed to background DNA. The amplificates carry a

C fluorescent label or radionuclide. Optionally, the labels of the
C amplificates are detachable molecule fragments having a typical mass
C which are detected in a mass spectrometer. The fragments of chemically
C pre-treated genomic DNA to be amplified, have a single positive or
C negative charge for a better detectability in the mass spectrometer.
C Preferably, the amplificates or fragments of the amplificates are
C detected by matrix assisted laser desorption/ionization mass spectrometry
C (MALDI) or using electron spray mass spectrometry (ESI). The
C present sequence is a probe used to detect a region containing
C a methylated cytosine from one of the chemically pre-treated reference
C DNA samples of the invention.
C Note: The sequence data for this patent did not form part
C of the printed specification, but was obtained in electronic
C format directly from WIPO at
C ftp.wipo.int/pub/published_pct_sequences.
K
Q Sequence 18 BP; 11 A; 4 C; 0 G; 3 T; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 18;
Best Local Similarity 81.2%; Pred. No. 8.4e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1535 TTTAAGATGTTTTTAT 1550
|||| | |||||| ||
Db 17 TTTAGGGTGTTTTAAT 2

ESULT 957
AD37308
D AAD37308 standard; DNA; 19 BP.
X
C AAD37308;
X
T 21-AUG-2002 (first entry)
X
E 3' primer #5 used for selective amplification of human ARE mRNAs.
X
W Human; untranslated region; UTR; adenylate uridylate-rich element; ARE;
W cancer; gene expression; PCR; primer; ss.
X
S Homo sapiens.
X
N WO200183691-A2.
X
D 08-NOV-2001.
X
F 12-APR-2001; 2001WO-US11993.
X
R 12-APR-2000; 2000US-196870P.
X
A (CLEV-) CLEVELAND CLINIC FOUND.
A (KING-) KING FAISAL SPECIALIST HOSPITAL & RES CE.
X
I Abu-Khabar KS, Williams BRG, Frevel M, Silverman RH;
X
R WPI; 2002-055473/07.
X
T Selecting adenylate uridylate-rich element (ARE) coding sequences from
T databases, comprises extracting nucleic acids with protein coding
T sequences upstream, contiguous with a 3' untranslated region having a
T specific ARE sequence -
X
S Disclosure; Page 12; 106pp; English.
X
C The invention relates to a gene discovery system and gene expression
C systems specific for genes encoding adenylate uridylate-rich element
C (ARE)-containing mRNAs. The invention relates to a method of selecting
C nucleic acids which involves extracting protein coding sequences from
C a database which contains several nucleic acids, each of which comprises
C full-length or partial protein coding sequences and a 3' untranslated
C region (UTR) sequence downstream and contiguous with protein coding
C sequences by identifying protein coding sequences located upstream and
C contiguous with a 3' UTR which has an adenylate uridylate-rich element
CC (ARE) search sequence. The method is used for selecting a set of nucleic
CC acids for analysing gene expression in a cell. Nucleic acids of the
CC invention are useful for preparing a customised array of ARE genes. The
CC microarrays produced are useful for obtaining an ARE expression profile
CC in a subject. The microarrays are useful for obtaining an ARE expression
CC profile, particularly a subject with a disease such as cancer. The ARE
CC genes identified by the above mentioned method are useful for generation
CC of polymerase chain reaction (PCR) products or oligonucleotides for use
CC as immobilised probes in cDNA or oligonucleotide microarrays. The present
CC sequence is a PCR primer which is used for the selective amplification of
CC human ARE mRNAs by reverse transcription.
XX
SQ Sequence 19 BP; 14 A; 0 C; 0 G; 5 T; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 19;
Best Local Similarity 81.2%; Pred. No. 8.5e+02;
Matches 13; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1591 AATATAAAAGTAAATA 1606
|||| | || ||||||
Db 1 AATAAATAAATAAATA 16

RESULT 958
AAH90994/c
ID AAH90994 standard; DNA; 19 BP.
XX
AC AAH90994;
XX
DT 09-OCT-2001 (first entry)
XX
DE Human inflammatory bowel disease associated polymorphic site #69.
XX
KW Human; inflammatory bowel disease; Crohn's disease; ulcerative colitis;
KW single nucleotide polymorphism; SNP; chromosome 19p13; paternity test;
KW chromosome 5q31-33; forensic test; gene therapy; ds.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT misc_feature 11
FT /*tag= a
FT /note= "SNP, optionally A or T at this position"
XX
PN WO200142511-A2.
XX
PD 14-JUN-2001.
XX
PF 11-DEC-2000; 2000WO-US33632.
XX
PR 10-DEC-1999; 99US-0170257.
PR 10-APR-2000; 2000US-0196046.
XX
PA (WHED) WHITEHEAD INST BIOMEDICAL RES.
PA (ELLI-) ELLIPSIS BIOTHERAPEUTICS CORP.
XX
PI Daly M, Hudson TJ, Lander ES, Rioux J, Siminovitch K;
XX
DR WPI; 2001-367874/38.
XX
PT Testing for the presence of polymorphisms associated with inflammatory
PT bowel disease, using a hybridization assay -
XX
PS Claim 1; Page 42; 463pp; English.
XX
CC The present invention describes a method for detecting the presence of
CC polymorphisms associated with inflammatory bowel diseases such as
CC ulcerative colitis and Crohn's disease. The methods can be used to detect
CC the presence of genetic polymorphisms associated with inflammatory bowel
CC disease and correlating their occurrence with disease states. They may be
CC used in this way for phenotypic correlations, forensics, paternity
CC testing, medicine and genetic analysis. The present sequence is a
CC polymorphic site described in the exemplification of the invention.

Sequence 19 BP; 5 A; 0 C; 1 G; 12 T; 1 other;

Query Match 0.9%; Score 11.2; DB 1; Length 19;
Best Local Similarity 76.5%; Pred. No. 8.5e+02;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

622 AACAACAAATAATTTTT 638
|| || || ||| ||||
19 AAAAAAAANTAAATTTT 3

SULT 959
L54044
AAL54044 standard; DNA; 24 BP.

AAL54044;

06-MAR-2003 (first entry)

Human macroprotein 16-39 PCR primer 1.

Human macroprotein 16.39; embryotic development deformity; tumour; DNA recombination; PCR; primer; ss.

Homo sapiens.

CN1342711-A.

03-APR-2002.

12-SEP-2000; 2000CN-0125188.

12-SEP-2000; 2000CN-0125188.

(BODE-) BODE GENE DEV CO LTD SHANGHAI.

Mao Y, Xie Y;

WPI; 2002-529786/57.

Polypeptide-human macroprotein 16.39 and polynucleotide for coding it -

Example 2; Page 19 (Disclosure); 35pp; Chinese.

The invention relates to the novel human macroprotein 16.39. The invention also relates to the polynucleotide for coding the protein, the process for preparing the protein by DNA recombination technique, the application of the protein in treating several diseases such as embryotic development deformity and tumours, the antagonist against this protein and its therapeutic action, and the application of the polynucleotide coding this new human macroprotein 16.35. This polynucleotide sequence represents a PCR primer of the human macroprotein 16.39 of the invention.

Sequence 24 BP; 7 A; 2 C; 2 G; 13 T; 0 other;

Query Match 0.9%; Score 11.2; DB 1; Length 24;
Best Local Similarity 66.7%; Pred. No. 8.9e+02;
Matches 16; Conservative 0; Mismatches 8; Indels 0; Gaps 0;

1137 AGTAAATTTATTTTATTTTAGATA 1160
|| | ||||| ||| ||| | |
1 AGCATATTTACTTTTATTTTTAGA 24

SULT 960
F53002/c
ABF53002 standard; DNA; 13 BP.

ABF53002;

21-FEB-2002 (first entry)

DE Oligonucleotide SEQ ID NO 152999 for detecting SNP TSC0038671.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.
XX
PR 07-APR-2000; 2000DE-1019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single nucleotide polymorphisms and cytosine
PT methylation status -
XX
PS Claim 1; SEQ ID 152999; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation.
CC ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
CC ABI00010-ABI82073 represent the oligomers described in the invention.
CC NOTE: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 13 BP; 4 A; 0 C; 0 G; 8 T; 1 other;

Query Match 0.9%; Score 11; DB 1; Length 13;
Best Local Similarity 84.6%; Pred. No. 7.4e+02;
Matches 11; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1613 ATTTAAAATATAA 1625
:|| |||||||||
Db 13 RTTAAAAATATAA 1

RESULT 961
ABF53003
ID ABF53003 standard; DNA; 13 BP.
XX
AC ABF53003;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 153000 for detecting SNP TSC0038671.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB00713.

```
X
R   07-APR-2000; 2000DE-1019173.
X
A   (EPIG-) EPIGENOMICS AG.
X
I   Olek A,  Piepenbrock C,  Berlin K;
X
R   WPI; 2001-657177/75.
X
T   Set of oligonucleotides, useful for diagnosis and cell typing, is
T   designed to detect single nucleotide polymorphisms and cytosine
T   methylation status  -
X
S   Claim 1; SEQ ID 153000; 29pp + Sequence Listing; German.
X
C   This invention describes novel oligonucleotide primers or peptide nucleic
C   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
C   and cytosine methylation status in chemically pretreated genomic DNA. The
C   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
C   range of diseases including immune system, gastrointestinal, respiratory,
C   central nervous system, cardiovascular and metabolic disorders. The
C   oligomers are also used for detecting cell type differentiation.
C   ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and
C   ABI00010-ABI82073 represent the oligomers described in the invention.
C   NOTE: The sequence data for this patent did not form part of the printed
C   specification, but was obtained in electronic format from WIPO at
C   ftp.wipo.int/pub/published_pct_sequences.
X
Q   Sequence 13 BP; 8 A; 0 C; 0 G; 4 T; 1 other;

  Query Match              0.9%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 7.4e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1613 ATTTAAAATATAA 1625
              :|| |||||||||
Db          1 RTTAAAAATATAA 13


RESULT 962
AAT81506
ID   AAT81506 standard; RNA; 17 BP.
XX
AC   AAT81506;
XX
DT   14-DEC-1997  (first entry)
XX
DE   Human c-myb hammerhead ribozyme target sequence (nt. position 2713).
XX
KW   Enzymatic nucleic acid; hammerhead; ribozyme; cleavage; human;
KW   smooth muscle cell; hyperproliferation; restenosis; cancer;
KW   c-myb; coronary angioplasty; ss.
XX
OS   Homo sapiens.
XX
PN   WO9531541-A2.
XX
PD   23-NOV-1995.
XX
PF   18-MAY-1995;   95WO-US06368.
XX
PR   13-JAN-1995;   95US-0373124.
PR   18-MAY-1994;   94US-0245466.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Draper K,  Jarvis T,  McSwiggen J,  Stinchcomb DT;
XX
DR   WPI; 1996-010927/01.
XX
PT   New enzymatic nucleic acid molecules - which cleave RNA produced by
PT   e.g. c-myb, for treating restenosis or cancer
XX
PS   Claim 1; Page 77; 128pp; English.
XX
CC   The present sequence represents the preferred target sequence for an
CC   enzymatic nucleic acid, especially a hammerhead ribozyme, which cleaves
CC   the human c-myb sequence at the base position indicated in the
CC   descriptor line. The c-myb sequence was screened for optimal ribozyme
CC   target sites using a computer folding algorithm, and regions of the mRNA
CC   which did not form secondary folding structures and contained potential
CC   ribozyme cleavage sites were identified.  Ribozymes were synthesised and
CC   their activities optimised by either varying the length of the binding
CC   arms or by modification to prevent degradation by nucleases.
CC   The ribozymes cleave the c-myb sequence and can be used to prevent
CC   smooth muscle cell hyperproliferation in restenosis, especially after
CC   coronary angioplasty, and in cancers.
XX
SQ   Sequence 17 BP; 9 A; 0 C; 0 G; 8 U; 0 other;

  Query Match              0.9%;  Score 11;  DB 1;  Length 17;
  Best Local Similarity   27.3%;  Pred. No. 8.7e+02;
  Matches    3;  Conservative    8;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1522 TTATATTTTA 1532
              ::|:|:::::|
Db          7 UUAUAUUUUUA 17


RESULT 963
AAT81507
ID   AAT81507 standard; RNA; 17 BP.
XX
AC   AAT81507;
XX
DT   14-DEC-1997  (first entry)
XX
DE   Human c-myb hammerhead ribozyme target sequence (nt. position 2715).
XX
KW   Enzymatic nucleic acid; hammerhead; ribozyme; cleavage; human;
KW   smooth muscle cell; hyperproliferation; restenosis; cancer;
KW   c-myb; coronary angioplasty; ss.
XX
OS   Homo sapiens.
XX
PN   WO9531541-A2.
XX
PD   23-NOV-1995.
XX
PF   18-MAY-1995;   95WO-US06368.
XX
PR   13-JAN-1995;   95US-0373124.
PR   18-MAY-1994;   94US-0245466.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Draper K,  Jarvis T,  McSwiggen J,  Stinchcomb DT;
XX
DR   WPI; 1996-010927/01.
XX
PT   New enzymatic nucleic acid molecules - which cleave RNA produced by
PT   e.g. c-myb, for treating restenosis or cancer
XX
PS   Claim 1; Page 77; 128pp; English.
XX
CC   The present sequence represents the preferred target sequence for an
CC   enzymatic nucleic acid, especially a hammerhead ribozyme, which cleaves
CC   the human c-myb sequence at the base position indicated in the
CC   descriptor line. The c-myb sequence was screened for optimal ribozyme
CC   target sites using a computer folding algorithm, and regions of the mRNA
CC   which did not form secondary folding structures and contained potential
CC   ribozyme cleavage sites were identified.  Ribozymes were synthesised and
CC   their activities optimised by either varying the length of the binding
CC   arms or by modification to prevent degradation by nucleases.
CC   The ribozymes cleave the c-myb sequence and can be used to prevent
CC   smooth muscle cell hyperproliferation in restenosis, especially after
```

coronary angioplasty, and in cancers.

Sequence 17 BP; 7 A; 0 C; 0 G; 10 U; 0 other;

Query Match 0.9%; Score 11; DB 1; Length 17;
Best Local Similarity 27.3%; Pred. No. 8.7e+02;
Matches 3; Conservative 8; Mismatches 0; Indels 0; Gaps 0;

1522 TTATATTTTA 1532
5 UUAUAUUUUA 15

RESULT 964
AAV24553/c
AAV24553 standard; DNA; 17 BP.

AAV24553;

16-SEP-1998 (first entry)

PCR primer for DNA polymerase fragment coding sequence.

DNA polymerase; HBV; RNA intermediate; nucleotide analogue sensitivity;
surface antigen interaction; sAg; antibody interaction; PCR primer;
anti-viral therapy; ss.

Synthetic.
Hepatitis b virus.

WO9821317-A1.

22-MAY-1998.

15-AUG-1997; 97WO-AU00520.

08-NOV-1996; 96AU-0003519.

(WHEA-) WESTERN HEALTH CARE NETWORK.

Aye TT, Bartholomeusz AI, De Man RA, Locarnini SA;

WPI; 1998-297924/26.

Variants of DNA virus replicating through RNA intermediate,
especially hepatitis B - have mutations in genes for DNA polymerase,
surface antigen or region of overlapping reading frames, and show
reduced sensitivity to antiviral agents or antibodies

Example 3; Page 19; 53pp; English.

This sequence is a PCR primer for DNA encoding a fragment of a
Hepatitis b virus (HBV) DNA polymerase. The amplified fragment can be
mutated to give the variant of a DNA virus of the invention, that
replicates via an RNA intermediate. Detection of mutations in the
encoded protein sequence can be used in a method for determining if a HBV
isolate has reduced sensitivity to a nucleotide analogue or if its
surface antigen (sAg) has reduced interaction with antibodies. Mutations
in the DNA polymerase gene indicate (partial) resistance to nucleotide
analogues while those in the sAg gene indicate reduced interaction with
specific antibodies. Detecting sequences containing these mutations is
used to monitor anti-viral treatments (chemotherapy and/or vaccination)
and to screen for agents that can overcome the effects of such mutations
(potentially useful in long-term treatments with nucleotide analogues).

Sequence 17 BP; 5 A; 4 C; 1 G; 7 T; 0 other;

Query Match 0.9%; Score 11; DB 1; Length 17;
Best Local Similarity 100.0%; Pred. No. 8.7e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1081 AAGAATTTGGA 1091
Db 13 AAGAATTTGGA 3

RESULT 965
AAV24555/c
ID AAV24555 standard; DNA; 17 BP.
XX
AC AAV24555;
XX
DT 16-SEP-1998 (first entry)
XX
DE PCR primer for DNA polymerase fragment coding sequence.
XX
KW DNA polymerase; HBV; RNA intermediate; nucleotide analogue sensitivity;
KW surface antigen interaction; sAg; antibody interaction; PCR primer;
KW anti-viral therapy; ss.
XX
OS Synthetic.
OS Hepatitis b virus.
XX
PN WO9821317-A1.
XX
PD 22-MAY-1998.
XX
PF 15-AUG-1997; 97WO-AU00520.
XX
PR 08-NOV-1996; 96AU-0003519.
XX
PA (WHEA-) WESTERN HEALTH CARE NETWORK.
XX
PI Aye TT, Bartholomeusz AI, De Man RA, Locarnini SA;
XX
DR WPI; 1998-297924/26.
XX
PT Variants of DNA virus replicating through RNA intermediate,
PT especially hepatitis B - have mutations in genes for DNA polymerase,
PT surface antigen or region of overlapping reading frames, and show
PT reduced sensitivity to antiviral agents or antibodies
XX
PS Example 3; Page 19; 53pp; English.
XX
CC This sequence is a PCR primer for DNA encoding a fragment of a
CC Hepatitis b virus (HBV) DNA polymerase. The amplified fragment can be
CC mutated to give the variant of a DNA virus of the invention, that
CC replicates via an RNA intermediate. Detection of mutations in the
CC encoded protein sequence can be used in a method for determining if a HBV
CC isolate has reduced sensitivity to a nucleotide analogue or if its
CC surface antigen (sAg) has reduced interaction with antibodies. Mutations
CC in the DNA polymerase gene indicate (partial) resistance to nucleotide
CC analogues while those in the sAg gene indicate reduced interaction with
CC specific antibodies. Detecting sequences containing these mutations is
CC used to monitor anti-viral treatments (chemotherapy and/or vaccination)
CC and to screen for agents that can overcome the effects of such mutations
CC (potentially useful in long-term treatments with nucleotide analogues).
XX
SQ Sequence 17 BP; 5 A; 4 C; 1 G; 7 T; 0 other;

Query Match 0.9%; Score 11; DB 1; Length 17;
Best Local Similarity 100.0%; Pred. No. 8.7e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1081 AAGAATTTGGA 1091
Db 13 AAGAATTTGGA 3

RESULT 966
AAN71403/c
ID AAN71403 standard; DNA; 17 BP.
XX
AC AAN71403;
XX
DT 25-MAR-2003 (updated)

```
T   18-APR-1991  (first entry)
X
E   Sequence of hybridization probe to detect the H. grisea
E   glucoamylase gene based on GA1 peptide.
X
W   Enzyme; fungal expression vector; Aspergillus expression vector;
W   Trichoderma; ss.
X
S   Humicola grisea.
X
N   EP215594-A.
X
D   25-MAR-1987.
X
F   27-AUG-1986;   86EP-0306624.
X
R   29-AUG-1985;   85US-0771374.
R   29-AUG-1985;   85US-0771394.
R   07-JUL-1986;   86US-0882224.
X
A   (GEMV ) GENENCOR INC.
X
I   Cullen D,  Gray GL,  Hayenga KJ,  Lawlis VB;
X
R   WPI; 1987-095049/14.
X
T   New DNA sequences for expressing polypeptide in filamentous fungi
T   - with secretion of prod. from the cells, and new vectors and
T   transformed fungi
X
S   Example; Fig 20; 45pp; English.
X
C   A DNA sequence coding for a heterologous polypeptide which can be
C   expressed in and secreted from filamentous fungi is claimed.  Pref.
C   the DNA sequence codes for bovine preprochymosin, M. meihei
C   preprocarboxyl protease or A. niger preproglucoamylase.  Also new
C   are vectors consisting of the DNA sequence plus an operably-linked
C   signal sequence.  The vectors may also include a sequence which
C   increases transformation efficiency, e.g. ANS-1.
C   (Updated on 25-MAR-2003 to correct PR field.)
C   (Updated on 25-MAR-2003 to correct PA field.)
X
Q   Sequence 17 BP; 8 A; 1 C; 0 G; 3 T; 5 other;

  Query Match             0.9%;  Score 11;  DB 1;  Length 17;
  Best Local Similarity   69.2%;  Pred. No. 8.7e+02;
  Matches    9;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTAT 1059
              ||:||:||:||:|
Db         17 TTDATRTAYTTRT 5


RESULT 967
AAQ78885/c
ID   AAQ78885 standard; DNA; 17 BP.
XX
AC   AAQ78885;
XX
DT   25-MAR-2003  (updated)
DT   18-DEC-1995  (first entry)
XX
DE   Humicola grisea glucoamylase hybridization probe.
XX
KW   Glucoamylase; DNA probe; gene cloning; protein secretion; ss.
XX
OS   Synthetic.
XX
PN   EP625577-A1.
XX
PD   23-NOV-1994.
XX
PF   27-AUG-1986;   94EP-0201751.
XX
PR   29-AUG-1985;   85US-0771374.
PR   07-JUL-1986;   86US-0882224.
PR   27-AUG-1986;   86EP-0306624.
XX
PA   (GEMV ) GENENCOR INT INC.
XX
PI   Berka RM,  Cullen D,  Gray GL,  Hayenga KJ,  Lawlis VB;
XX
DR   WPI; 1994-359750/45.
XX
PT   Vectors and DNA for expressing polypeptide(s) in filamentous fungi
PT   - include secretory signal sequences that are native or foreign to
PT   heterologous polypeptide(s), such as chymosin or glucoamylase.
XX
PS   Example 9A3; Page 22; 50pp; English.
XX
CC   The DNA probe and corresponding probes covering the degenerate
CC   sites (AAQ78886-Q78891) correspond to amino acids 17-22 of the
CC   H. grisea glucoamylase peptide GA1 (AAR62933), and are used as
CC   hybridization probes to detect and isolate H. grisea glucoamylase
CC   DNA in a Southern blot.  Resulting genomic DNA fragments are
CC   excised and cloned in plasmid pRSH1.  This illustrates the main
CC   claims of the patent, i.e. a vector containing (i) DNA encoding
CC   a heterologous polypeptide (chymosin, prochymosin, preprochymosin,
CC   Aspergillus niger glucoamylase, H. grisea glucoamylase, or Mucor
CC   miehei carboxyl protease) and (ii) a secretory signal peptide,
CC   and a filamentous fungus (Aspergillus, Trichoderma, Neurospora,
CC   Podospora, Endothia, Mucor, Cochiobolus or Pyriclaria, especially
CC   A. nidulans, A. awamori or T. reesei) transformed with the vector
CC   for recombinant protein (enzyme) production.
CC   (Updated on 25-MAR-2003 to correct PF field.)
CC   (Updated on 25-MAR-2003 to correct PR field.)
XX
SQ   Sequence 17 BP; 8 A; 1 C; 0 G; 3 T; 5 other;

  Query Match             0.9%;  Score 11;  DB 1;  Length 17;
  Best Local Similarity   69.2%;  Pred. No. 8.7e+02;
  Matches    9;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTAT 1059
              ||:||:||:||:|
Db         17 TTDATRTAYTTRT 5


RESULT 968
AAV44676
ID   AAV44676 standard; DNA; 20 BP.
XX
AC   AAV44676;
XX
DT   08-OCT-1998  (first entry)
XX
DE   PCR primer for UC Band#325-1.
XX
KW   DNA marker; metastatic prostate cancer; human; detection; PCR primer;
KW   disease marker identification; lupus erythematosus; rheumatoid arthritis;
KW   multiple sclerosis; asthma; myasthenia gravis; autoimmune thyroiditis;
KW   amyloid lateral sclerosis; interstitial cystitis; prostatis;
KW   UC Band#325-1; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9824935-A1.
XX
PD   11-JUN-1998.
XX
PF   05-DEC-1997;   97WO-US22105.
XX
PR   24-MAR-1997;   97US-0041576.
PR   06-DEC-1996;   96US-0032619.
PR   12-DEC-1996;   96US-0032701.
```

```
X
A   (UROC-) UROCOR INC.
X
I   An G,  O'Hara M,  Ralph D,  Veltri R;
X
R   WPI; 1998-333350/29.
X
T   Identifying markers for disease states - by amplifying RNA from
T   peripheral blood and identifying RNA which is differential expressed
T   between normal and disease state subjects
K
S   Example 3; Page 91; 158pp; English.
K
C   This sequence is a PCR primer for the marker DNA sequence UC Band#325-1
C   and was used in the method of the invention. The method is for
C   identifying markers for a disease state, and comprises: (a) providing a
C   first set of peripheral blood mRNAs from one or more subjects known to
C   exhibit the disease state and a second set of peripheral blood mRNAs from
C   one or more normal subjects; (b) amplifying both sets of mRNAs to provide
C   nucleic acid amplification products; (c) comparing the sets of
C   amplification products; and (d) identifying those mRNAs that are
C   differentially expressed between normal subjects and subjects exhibiting
C   the disease state; where a difference in quantity of expression of an
C   mRNA is indicative of a disease marker. The identified marker
C   sequence can be used in a method of detecting a metastatic cancer disease
C   state, especially for detection prostate cancer. Using the methods, a
C   disease state may be detected, diagnosed, or a prognosis may be delivered
C   by examining a blood sample rather than relying on a more invasive, or
C   less sensitive test. In addition, a subject may be monitored for disease
C   progression, status and response to therapies through monitoring of
C   differentially expressed disease markers. The methods can be used for
C   diseases such as cancer (especially metastatic or prostate cancer),
C   asthma, lupus erythematosus, rheumatoid arthritis, multiple sclerosis,
C   myasthenia gravis, autoimmune thyroiditis, amyloid lateral sclerosis,
C   interstitial cystitis, prostatis or other systemic or chronic conditions.
K
Q   Sequence 20 BP; 7 A; 8 C; 3 G; 2 T; 0 other;

 Query Match             0.9%;  Score 11;  DB 1;  Length 20;
 Best Local Similarity   100.0%;  Pred. No. 9.2e+02;
 Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

y        850 TGGCAACCCTA 860
             ||||||||||| 
b          1 TGGCAACCCTA 11


ESULT 969
AV44678
D   AAV44678 standard; DNA; 20 BP.
K
C   AAV44678;
K
T   08-OCT-1998  (first entry)
K
E   PCR primer for UC Band#325-2.
X
W   DNA marker; metastatic prostate cancer; human; detection; PCR primer;
W   disease marker identification; lupus erythematosus; rheumatoid arthritis;
W   multiple sclerosis; asthma; myasthenia gravis; autoimmune thyroiditis;
W   amyloid lateral sclerosis; interstitial cystitis; prostatis;
W   UC Band#325-2; ss.
K
S   Synthetic.
S   Homo sapiens.
K
N   WO9824935-A1.
K
D   11-JUN-1998.
K
F   05-DEC-1997;   97WO-US22105.
K
R   24-MAR-1997;   97US-0041576.
PR   06-DEC-1996;   96US-0032619.
PR   12-DEC-1996;   96US-0032701.
XX
PA   (UROC-) UROCOR INC.
XX
PI   An G,  O'Hara M,  Ralph D,  Veltri R;
XX
DR   WPI; 1998-333350/29.
XX
PT   Identifying markers for disease states - by amplifying RNA from
PT   peripheral blood and identifying RNA which is differential expressed
PT   between normal and disease state subjects
XX
PS   Example 3; Page 91; 158pp; English.
XX
CC   This sequence is a PCR primer for the marker DNA sequence UC Band#325-2
CC   and was used in the method of the invention. The method is for
CC   identifying markers for a disease state, and comprises: (a) providing a
CC   first set of peripheral blood mRNAs from one or more subjects known to
CC   exhibit the disease state and a second set of peripheral blood mRNAs from
CC   one or more normal subjects; (b) amplifying both sets of mRNAs to provide
CC   nucleic acid amplification products; (c) comparing the sets of
CC   amplification products; and (d) identifying those mRNAs that are
CC   differentially expressed between normal subjects and subjects exhibiting
CC   the disease state; where a difference in quantity of expression of an
CC   mRNA is indicative of a disease marker. The identified marker
CC   sequence can be used in a method of detecting a metastatic cancer disease
CC   state, especially for detection prostate cancer. Using the methods, a
CC   disease state may be detected, diagnosed, or a prognosis may be delivered
CC   by examining a blood sample rather than relying on a more invasive, or
CC   less sensitive test. In addition, a subject may be monitored for disease
CC   progression, status and response to therapies through monitoring of
CC   differentially expressed disease markers. The methods can be used for
CC   diseases such as cancer (especially metastatic or prostate cancer),
CC   asthma, lupus erythematosus, rheumatoid arthritis, multiple sclerosis,
CC   myasthenia gravis, autoimmune thyroiditis, amyloid lateral sclerosis,
CC   interstitial cystitis, prostatis or other systemic or chronic conditions.
XX
SQ   Sequence 20 BP; 7 A; 8 C; 3 G; 2 T; 0 other;

  Query Match             0.9%;  Score 11;  DB 1;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 9.2e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        850 TGGCAACCCTA 860
              ||||||||||| 
Db          1 TGGCAACCCTA 11


RESULT 970
AAZ30727
ID   AAZ30727 standard; DNA; 20 BP.
XX
AC   AAZ30727;
XX
DT   19-JAN-2000  (first entry)
XX
DE   Human interleukin-8 (IL-8) RT-PCR primer #11.
XX
KW   Interleukin-8; IL-8; marker; expression; diagnosis;
KW   differential; disease; cancer; metastatic; breast cancer; prostate;
KW   peripheral leukocyte; immune response; asthma; lupus erythematosus;
KW   rheumatoid arthritis; multiple sclerosis; myasthenia gravis;
KW   autoimmune thyroiditis; amyotrophic lateral sclerosis; ALS;
KW   interstitial cystitis; prostatitis; mRNA; reverse transcriptase PCR;
KW   RT-PCR; screening; early; diagnosis; prognosis; monitoring; primer; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9949083-A1.
XX
PD   30-SEP-1999.
```

```
X
F   24-MAR-1999;   99WO-US06488.
X
R   24-MAR-1998;   98US-0046894.
X
A   (UROC-) UROCOR INC.
X
I   Ralph D,  An G,  O'Hara SM,  Veltri RW;
X
R   WPI; 1999-591105/50.
X
T   Identifying markers of human disease, specifically for diagnosis of
T   metastatic prostatic and breast cancers  -
X
S   Example 3; Page 122; 225pp; English.
X
C   This sequence represents human interleukin-8 (IL-8) reverse
C   transcriptase-PCR (RT-PCR) primer #11, used with primers #10 (AAZ30726)
C   or #12 (AAZ30728) to amplify 2 different IL-8 cDNAs (AAZ30714-Z30715)
C   from peripheral leukocyte RNA. IL-8 cDNA is referred to in this
C   specification as UC Band #325-1, while an IL-8 cDNA containing intron #3
C   is referred to as UC Band #325-2. The IL-8 gene was found to be
C   differentially expressed between healthy subjects and patients with
C   metastatic cancers (especially those of the prostate or breast) and may
C   therefore be used as a marker for such diseases. Detecting levels of such
C   human disease markers is used for diagnosis (also prognosis and
C   monitoring) of diseases, including metastatic or organ-confined cancers,
C   and diseases which also elicit an immune response such as asthma, lupus
C   erythematosus, rheumatoid arthritis, multiple sclerosis, myasthenia
C   gravis, autoimmune thyroiditis, amyotrophic lateral sclerosis (ALS),
C   interstitial cystitis and prostatitis, but especially metastatic
C   prostatic and breast cancer. A particular use is differentiating between
C   prostatic cancer and benign prostatic hypertrophy, and between advanced
C   and localised prostatic cancer, by multivariate analysis of several
C   different markers. Cancers can be treated by administering sequences
C   antisense to sequences that encode human disease markers. This method
C   detects a leukocyte response to disease rather than products of diseased
C   cells, so is suitable for large-scale screening of asymptomatic subjects.
C   Disease can be detected at an early stage, when few, if any, diseased
C   cells are present in the circulation. Analysis of blood samples
C   eliminates the need for more invasive methods for obtaining samples.
CX
SQ  Sequence 20 BP; 7 A; 8 C; 3 G; 2 T; 0 other;

  Query Match             0.9%;  Score 11;  DB 1;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 9.2e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        850 TGGCAACCCTA 860
              ||||||||||
Db          1 TGGCAACCCTA 11


RESULT 971
AAS21760/c
ID  AAS21760 standard; DNA; 20 BP.
XX
AC  AAS21760;
XX
DT  21-NOV-2001  (first entry)
XX
DE  Mouse Survivin antisense oligonucleotide #62.
XX
KW  Survivin; human; mouse; cytostatic; antisense oligonucleotide;
KW  hyperproliferative condition; cancer; apoptosis; cytokinesis; ss.
XX
OS  Mus musculus.
OS  Synthetic.
XX
PN  WO200157059-A1.
XX
PD  09-AUG-2001.
XX
PF  30-JAN-2001; 2001WO-US02939.
XX
PR  02-FEB-2000; 2000US-0496694.
XX
PA  (ISIS-) ISIS PHARM INC.
XX
PI  Bennett CF,  Ackermann EJ,  Swayze EE,  Cowsert LM;
XX
DR  WPI; 2001-488863/53.
XX
PT  Novel antisense compounds for modulating the expression of Survivin and
PT  treatment of cancer -
XX
PS  Example 18; Page 62; 120pp; English.
XX
CC  The invention relates to antisense oligonucleotides targeted to a nucleic
CC  acid molecule encoding human Survivin, where the antisense
CC  oligonucleotide inhibits the expression of human Survivin. These
CC  antisense oligonucleotides are used in the treatment of an animal
CC  suffering from a disease or condition associated with Survivin, e.g. a
CC  hyperproliferative condition such as cancer, and comprises administering
CC  a therapeutically or prophylactically effective amount of the antisense
CC  oligonucleotide so that expression of Survivin is inhibited. The
CC  oligonucleotides can also be used to treat a human suffering from a
CC  disease or condition characterised by a reduction in apoptosis
CC  comprising administering the antisense oligonucleotide to a human. In
CC  addition, the antisense oligonucleotide and a cytotoxic chemotherapeutic
CC  agent e.g. taxol or cisplatin, can be used to modulate apoptosis,
CC  cytokinesis or the cell cycle, or inhibit the proliferation in a cancer
CC  cell by contacting the cell with the antisense oligonucleotide.
CC  AAS21521-AAS21768 represent Survivin nucleic acids, and antisense
CC  oligonucleotides targeted to Survivin, used in the method of the
CC  invention.
XX
SQ  Sequence 20 BP; 6 A; 0 C; 2 G; 12 T; 0 other;

  Query Match             0.9%;  Score 11;  DB 1;  Length 20;
  Best Local Similarity   73.7%;  Pred. No. 9.2e+02;
  Matches   14;  Conservative    0;  Mismatches    5;  Indels    0;  Gaps    0;

Qy       1250 ATAAACAACAAATAATTTT 1268
              ||| | ||  ||||| |||
Db         19 ATACAAAAATAATAACTTT 1


RESULT 972
AAH80901
ID  AAH80901 standard; cDNA; 20 BP.
XX
AC  AAH80901;
XX
DT  19-SEP-2001  (first entry)
XX
DE  Oligonucleotide hybridisation potential related cDNA SEQ ID NO: 865.
XX
KW  Nucleic acid hybridisation; probe; primer; human; rabbit; HIV-1;
KW  disease diagnosis; ss.
XX
OS  Human immunodeficiency virus type 1.
XX
PN  US6251588-B1.
XX
PD  26-JUN-2001.
XX
PF  10-FEB-1998;  98US-0021701.
XX
PR  10-FEB-1998;  98US-0021701.
XX
PA  (AGIL-) AGILENT TECHNOLOGIES INC.
XX
PI  Shannon KW,  Wolber PK,  Delenstarr GC,  Webb PG,  Kincaid RH;
XX
DR  WPI; 2001-424456/45.
```

K
T Predicting the potential of an oligonucleotide to hybridize to a target
T nucleotide sequence, useful for evaluating oligonucleotide probe
T sequences, by identifying a oligonucleotides based on the evaluation of
T parameters -
S
S Example 2; Column 73; 342pp; English.
C
C The present invention describes a method for predicting the potential of
C an oligonucleotide to hybridise to a (complementary) target nucleotide
C sequence, involving identifying a subset of oligonucleotides within the
C predetermined number of unique oligonucleotides based on the evaluation
C of the parameter. Oligonucleotides in the subset are identified that are
C clustered along a region of the nucleotide sequence that is hybridisable
C to the target nucleotide sequence. This is useful for evaluating
C oligonucleotide probe sequences. The present sequence is an
C oligonucleotide described in the exemplification of the invention.
C
S Sequence 20 BP; 9 A; 1 C; 5 G; 5 T; 0 other;

Query Match 0.9%; Score 11; DB 1; Length 20;
Best Local Similarity 73.7%; Pred. No. 9.2e+02;
Matches 14; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

Qy 518 TGGTTAAATTTGAATTTCA 536
||| |||||| || | ||
Db 2 TGGGAAAATTTAAAGTGCA 20

RESULT 973
AAQ79313/c
ID AAQ79313 standard; DNA; 21 BP.
XX
AC AAQ79313;
XX
DT 25-MAR-2003 (updated)
DT 23-JUN-1995 (first entry)
XX
DE Human c-raf-1 oncogene mRNA 2819-2798 antisense oligonucleotide DK-23.
XX
KW Antisense oligonucleotide; ras-activated cancer cells;
KW anti-raf-1 oncogene; antisense inhibition of translation; ss.
XX
OS Synthetic.
XX
PN WO9423755-A1.
XX
PD 27-OCT-1994.
XX
PF 11-APR-1994; 94WO-US04091.
XX
PR 09-APR-1993; 93US-0045374.
XX
PA (UYNE-) UNIV NEBRASKA.
XX
PI Iversen PL;
XX
DR WPI; 1994-341496/42.
XX
PT New heterotypic anti-raf antisense oligonucleotide(s) - for
PT killing ras-activated cancer cells.
XX
PS Disclosure; Page 61; 81pp; English.
XX
CC Anti-raf antisense oligonucleotides can be used to kill cancer cells
CC which contain an activated ras oncogene. This is one of a group of
CC antisense oligonucleotides which are exemplified in the
CC specification; they are 8-50 nucleotides long and are antisense to
CC regions of the A-raf-1 or the c-raf-1 genes obtained from the
CC "EUGENE" gene library.
CC (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ Sequence 21 BP; 14 A; 6 C; 0 G; 1 T; 0 other;

Query Match 0.9%; Score 11; DB 1; Length 21;
Best Local Similarity 73.7%; Pred. No. 9.3e+02;
Matches 14; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

Qy 1043 ATTATTTATGTATTTATTT 1061
||| ||| | | ||| |||
Db 20 ATTGTTTGTTTGTTTGTTT 2

RESULT 974
AAH62202
ID AAH62202 standard; DNA; 21 BP.
XX
AC AAH62202;
XX
DT 12-SEP-2001 (first entry)
XX
DE Fer tyrosine kinase polymorphism containing DNA fragment #103.
XX
KW Single nucleotide polymorphism; SNP; human; cancer; inflammation;
KW heart disease; paternity testing; forensic science; ds.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Variation replace(11,G)
FT /*tag= a
FT /standard_name= "single nucleotide polymorphism"
XX
PN WO200138576-A2.
XX
PD 31-MAY-2001.
XX
PF 17-NOV-2000; 2000WO-US31639.
XX
PR 24-NOV-1999; 99US-0167334.
XX
PA (WHED) WHITEHEAD INST BIOMEDICAL RES.
XX
PI Cargill M, Ireland JS, Lander ES;
XX
DR WPI; 2001-367705/38.
XX
PT New nucleic acid segments of the human genome, particularly from genes
PT including polymorphic sites,for phenotype correlation, forensics,
PT paternity testing, medicine and genetic analysis -
XX
PS Claim 1; Page 38; 80pp; English.
XX
CC DNA sequences AAH62100 - AAH62688 represent segments of human genes which
CC contain single nucleotide polymorphisms (SNPs). A method is included in
CC the invention for analysing a nucleic acid sample, which consists of
CC determining the base occupying any one of the polymorphic sites given in
CC the SNP containing sequences. The nucleotide sequences can be used in the
CC diagnosis or monitoring of diseases, such as cancer, inflammation, heart
CC diseases, diseases of the cardiovascular system, and infection by
CC microorganisms. The oligonucleotides are also useful in the manufacture
CC of a medicament for the treatment or prophylaxis of the diseases, and as
CC a pharmaceutical. SNP containing oligonucleotides are useful in
CC applications such as phenotype correlation, forensics, paternity testing,
CC medicine and genetic analysis.
XX
SQ Sequence 21 BP; 11 A; 1 C; 4 G; 5 T; 0 other;

Query Match 0.9%; Score 11; DB 1; Length 21;
Best Local Similarity 73.7%; Pred. No. 9.3e+02;
Matches 14; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

Qy 1587 TGGAAATATAAAAGTAAAT 1605
||||| | |||| || |
Db 1 TGGAAACAGTAAAGAAATT 19

```
ESULT 975
BZ00185/c
D   ABZ00185 standard; DNA; 50 BP.
X
C   ABZ00185;
X
T   09-JAN-2003  (first entry)
X
E   Human leukocyte gene expression profiling probe SEQ ID NO 176.
X
W   T7; leukocyte; gene expression profiling; allograft rejection;
W   atherosclerosis; congestive heart failure; systemic lupus erythematosus;
W   rheumatoid arthritis; osteoarthritis; cytomegalovirus; infection;
W   probe; ss.
X
S   Homo sapiens.
X
N   WO200257414-A2.
X
D   25-JUL-2002.
X
F   22-OCT-2001; 2001WO-US47856.
X
R   20-OCT-2000; 2000US-241994P.
R   08-JUN-2001; 2001US-296764P.
X
A   (BIOC-) BIOCARDIA INC.
X
I   Wohlgemuth J,  Fry K,  Matcuk G,  Altman P,  Prentice J,  Phillips J;
I   Ly N,  Woodward R,  Quertermous T,  Johnson F;
X
R   WPI; 2002-636525/68.
X
T   New system for leukocyte expression profiling, diagnosing a disease, or
T   monitoring (the rate of) progression of a disease, e.g. atherosclerosis
T   or congestive heart failure, comprises diagnostic oligonucleotides  -
X
S   Claim 1; Page 332; 2038pp; English.
X
C   The invention relates to a system for detecting gene expression, which
C   comprises one or two isolated DNA molecules that detect expression of a
C   gene, where the gene corresponds to any of 8143 oligonucleotides
C   (ABZ00010-ABZ08152) each having 50 base pairs (bp). The system is useful
C   for leukocyte expression profiling. It is particularly useful for
C   diagnosing a disease, monitoring (rate of) progression of a disease,
C   predicting therapeutic outcome, determining prognosis for a patient,
C   predicting disease complications in an individual or monitoring response
C   to treatment in an individual. The diseases include cardiac allograft
C   rejection, kidney allograft rejection, liver allograft rejection,
C   atherosclerosis, congestive heart failure, systemic lupus erythematosus,
C   rheumatoid arthritis, osteoarthritis or cytomegalovirus infection.
X
Q   Sequence 50 BP; 14 A; 4 C; 15 G; 17 T; 0 other;

  Query Match             0.9%;  Score 11;  DB 1;  Length 50;
  Best Local Similarity   57.1%;  Pred. No. 5.6e+02;
  Matches   20;  Conservative    0;  Mismatches   15;  Indels    0;  Gaps    0;

Qy        596 AGTATTATTTATTTGAATCTACAAAAAACAACAAA 630
              | ||||   || ||  ||   |  |  | ||||| |
Db         38 ATTATTCCGTAATTCAACACAGCACTACCAACACA 4


ESULT 976
AT56320/c
D   AAT56320 standard; RNA; 15 BP.
X
C   AAT56320;
X
T   25-MAR-2003  (updated)
T   14-MAY-1997  (first entry)
X
```

```
DE   Mouse TNF-a hammerhead ribozyme target sequence (nt position 1310).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Mus musculus.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
PR   28-NOV-1994;   94US-0345516.
PR   16-DEC-1994;   94US-0357577.
PR   23-DEC-1994;   94US-0363233.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
PI   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them  -
PT   for use in inhibiting disease related genes
XX
PS   Claim 2; Page 252; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
CC   mRNA at the nucleotide base position indicated in the DE line.
CC   Regions of the mRNA that do not form secondary folding
CC   structures and that contain potential hammerhead and hairpin
CC   ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease
CC   resistance. The ribozymes are designed to cleave the target
CC   sequences and thereby inhibit TNF-alpha expression, making them
```

```
C   potentially useful for treating rheumatoid arthritis, septic shock
C   and other inflammatory disorders including psoriasis, as well as
C   for treatment of AIDS.
C   (Updated on 25-MAR-2003 to correct PI field.)
K
Q   Sequence 15 BP; 4 A; 0 C; 0 G; 11 U; 0 other;

 Query Match              0.9%;  Score 10.8;  DB 1;  Length 15;
 Best Local Similarity   85.7%;  Pred. No. 8.8e+02;
 Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Q       1250 ATAAACAACAAATA 1263
             ||||| || |||||
D         14 ATAAATAATAAATA 1


RESULT 977
AAT55811/c
ID   AAT55811 standard; RNA; 15 BP.
XX
AC   AAT55811;
XX
DT   25-MAR-2003  (updated)
DT   25-MAR-1997  (first entry)
XX
DE   Human TNF-alpha hammerhead ribozyme target sequence (nt position 1269).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
R    23-FEB-1994;   94US-0201109.
R    29-MAR-1994;   94US-0218934.
R    04-APR-1994;   94US-0222795.
R    07-APR-1994;   94US-0224483.
R    15-APR-1994;   94US-0227958.
R    15-APR-1994;   94US-0228041.
R    18-MAY-1994;   94US-0245736.
R    06-JUL-1994;   94US-0271280.
R    15-AUG-1994;   94US-0291932.
R    16-AUG-1994;   94US-0291433.
R    17-AUG-1994;   94US-0292620.
R    19-AUG-1994;   94US-0293520.
R    02-SEP-1994;   94US-0300000.
R    08-SEP-1994;   94US-0303039.
R    23-SEP-1994;   94US-0311486.
R    23-SEP-1994;   94US-0311749.
R    28-SEP-1994;   94US-0314397.
R    03-OCT-1994;   94US-0316771.
R    07-OCT-1994;   94US-0319492.
R    11-OCT-1994;   94US-0321993.
R    04-NOV-1994;   94US-0334847.
R    10-NOV-1994;   94US-0337608.
R    28-NOV-1994;   94US-0345516.
R    16-DEC-1994;   94US-0357577.
R    23-DEC-1994;   94US-0363233.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
PI   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them -
PT   for use in inhibiting disease related genes
XX
PS   Claim 2; Page 243; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
CC   mRNA at the nucleotide base position indicated in the DE line.
CC   Regions of the mRNA that do not form secondary folding
CC   structures and that contain potential hammerhead and hairpin
CC   ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease
CC   resistance. The ribozymes are designed to cleave the target
CC   sequences and thereby inhibit TNF-alpha expression, making them
CC   potentially useful for treating rheumatoid arthritis, septic shock
CC   and other inflammatory disorders including psoriasis, as well as
CC   for treatment of AIDS.
CC   (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 15 BP; 4 A; 0 C; 0 G; 11 U; 0 other;

  Query Match              0.9%;  Score 10.8;  DB 1;  Length 15;
  Best Local Similarity   85.7%;  Pred. No. 8.8e+02;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1250 ATAAACAACAAATA 1263
              ||||| || |||||
Db         14 ATAAATAATAAATA 1


RESULT 978
AAT55796/c
ID   AAT55796 standard; RNA; 15 BP.
XX
AC   AAT55796;
XX
DT   25-MAR-2003  (updated)
DT   25-MAR-1997  (first entry)
XX
DE   Human TNF-alpha hammerhead ribozyme target sequence (nt position 1258).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
```

```
'R   23-FEB-1994;   94US-0201109.
'R   29-MAR-1994;   94US-0218934.
'R   04-APR-1994;   94US-0222795.
'R   07-APR-1994;   94US-0224483.
'R   15-APR-1994;   94US-0227958.
'R   15-APR-1994;   94US-0228041.
'R   18-MAY-1994;   94US-0245736.
'R   06-JUL-1994;   94US-0271280.
'R   15-AUG-1994;   94US-0291932.
R   16-AUG-1994;   94US-0291433.
R   17-AUG-1994;   94US-0292620.
R   19-AUG-1994;   94US-0293520.
R   02-SEP-1994;   94US-0300000.
R   08-SEP-1994;   94US-0303039.
R   23-SEP-1994;   94US-0311486.
R   23-SEP-1994;   94US-0311749.
R   28-SEP-1994;   94US-0314397.
R   03-OCT-1994;   94US-0316771.
R   07-OCT-1994;   94US-0319492.
R   11-OCT-1994;   94US-0321993.
R   04-NOV-1994;   94US-0334847.
R   10-NOV-1994;   94US-0337608.
R   28-NOV-1994;   94US-0345516.
R   16-DEC-1994;   94US-0357577.
R   23-DEC-1994;   94US-0363233.
X
'A   (RIBO-) RIBOZYME PHARM INC.
X
'I   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
'I   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
'I   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
'I   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
X
'R   WPI; 1995-351090/45.
X
'T   Ribozymes having modified bases and methods for producing them  -
'T   for use in inhibiting disease related genes
X
'S   Claim 2; Page 242; 407pp; English.
X
'C   The present sequence represents a preferred target sequence for an
'C   enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
'C   mRNA at the nucleotide base position indicated in the DE line.
'C   Regions of the mRNA that do not form secondary folding
'C   structures and that contain potential hammerhead and hairpin
'C   ribozyme cleavage sites were identified by computer analysis.
'C   Ribozymes directed against these mRNA sequences were designed and
'C   synthesised with modifications that improve their nuclease
'C   resistance. The ribozymes are designed to cleave the target
'C   sequences and thereby inhibit TNF-alpha expression, making them
'C   potentially useful for treating rheumatoid arthritis, septic shock
'C   and other inflammatory disorders including psoriasis, as well as
'C   for treatment of AIDS.
'C   (Updated on 25-MAR-2003 to correct PI field.)
X
'Q   Sequence 15 BP; 4 A; 0 C; 0 G; 11 U; 0 other;

  Query Match             0.9%;  Score 10.8;  DB 1;  Length 15;
  Best Local Similarity   85.7%;  Pred. No. 8.8e+02;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

'y       1250 ATAAACAACAAATA 1263
              ||||| || ||||||
'b         14 ATAAATAATAAATA 1

'ESULT 979
'AT56348/c
'D   AAT56348 standard; RNA; 15 BP.
'X
'C   AAT56348;
'X
'T   25-MAR-2003  (updated)
DT   14-MAY-1997  (first entry)
XX
DE   Mouse TNF-a hammerhead ribozyme target sequence (nt position 1319).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome;
KW   AIDS; ss.
XX
OS   Mus musculus.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB00156.
XX
PR   30-JAN-1995;   95US-0380734.
PR   23-FEB-1994;   94US-0201109.
PR   29-MAR-1994;   94US-0218934.
PR   04-APR-1994;   94US-0222795.
PR   07-APR-1994;   94US-0224483.
PR   15-APR-1994;   94US-0227958.
PR   15-APR-1994;   94US-0228041.
PR   18-MAY-1994;   94US-0245736.
PR   06-JUL-1994;   94US-0271280.
PR   15-AUG-1994;   94US-0291932.
PR   16-AUG-1994;   94US-0291433.
PR   17-AUG-1994;   94US-0292620.
PR   19-AUG-1994;   94US-0293520.
PR   02-SEP-1994;   94US-0300000.
PR   08-SEP-1994;   94US-0303039.
PR   23-SEP-1994;   94US-0311486.
PR   23-SEP-1994;   94US-0311749.
PR   28-SEP-1994;   94US-0314397.
PR   03-OCT-1994;   94US-0316771.
PR   07-OCT-1994;   94US-0319492.
PR   11-OCT-1994;   94US-0321993.
PR   04-NOV-1994;   94US-0334847.
PR   10-NOV-1994;   94US-0337608.
PR   28-NOV-1994;   94US-0345516.
PR   16-DEC-1994;   94US-0357577.
PR   23-DEC-1994;   94US-0363233.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
PI   Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them  -
PT   for use in inhibiting disease related genes
XX
PS   Claim 2; Page 252; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
CC   mRNA at the nucleotide base position indicated in the DE line.
CC   Regions of the mRNA that do not form secondary folding
CC   structures and that contain potential hammerhead and hairpin
CC   ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease
```

```
C   resistance. The ribozymes are designed to cleave the target
C   sequences and thereby inhibit TNF-alpha expression, making them
C   potentially useful for treating rheumatoid arthritis, septic shock
C   and other inflammatory disorders including psoriasis, as well as
C   for treatment of AIDS.
C   (Updated on 25-MAR-2003 to correct PI field.)
K
2   Sequence 15 BP; 4 A; 0 C; 0 G; 11 U; 0 other;

 Query Match             0.9%;  Score 10.8;  DB 1;  Length 15;
 Best Local Similarity   85.7%;  Pred. No. 8.8e+02;
 Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

/       1251 TAAACAACAAATAA 1264
             |||| || ||||||
)         15 TAAATAATAAATAA 2


SULT 980
AT55809/c
)   AAT55809 standard; RNA; 15 BP.
:
:   AAT55809;
:
:   25-MAR-2003  (updated)
:   25-MAR-1997  (first entry)
:
3   Human TNF-alpha hammerhead ribozyme target sequence (nt position 1267).
:
:   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
:   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
:   intercellular adhesion molecule; rel A; tumour necrosis factor;
:   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
:   translocation; chronic myelogenous leukaemia; CML; cancer;
:   Philadelphia chromosome; inflammation; autoimmune disease;
:   atherosclerosis; myocardial infarction; stroke; restenosis;
:   transplant rejection; rheumatoid arthritis; psoriasis;
:   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
:   human immunodeficiency virus; acquired immune deficiency syndrome;
:   AIDS; ss.
:
3   Homo sapiens.
:
:   WO9523225-A2.
:
)   31-AUG-1995.
:
:   23-FEB-1995;   95WO-IB00156.
:
:   30-JAN-1995;   95US-0380734.
:   23-FEB-1994;   94US-0201109.
:   29-MAR-1994;   94US-0218934.
:   04-APR-1994;   94US-0222795.
:   07-APR-1994;   94US-0224483.
:   15-APR-1994;   94US-0227958.
:   15-APR-1994;   94US-0228041.
:   18-MAY-1994;   94US-0245736.
:   06-JUL-1994;   94US-0271280.
:   15-AUG-1994;   94US-0291932.
:   16-AUG-1994;   94US-0291433.
:   17-AUG-1994;   94US-0292620.
:   19-AUG-1994;   94US-0293520.
:   02-SEP-1994;   94US-0300000.
:   08-SEP-1994;   94US-0303039.
:   23-SEP-1994;   94US-0311486.
:   23-SEP-1994;   94US-0311749.
:   28-SEP-1994;   94US-0314397.
:   03-OCT-1994;   94US-0316771.
:   07-OCT-1994;   94US-0319492.
:   11-OCT-1994;   94US-0321993.
:   04-NOV-1994;   94US-0334847.
:   10-NOV-1994;   94US-0337608.
:   28-NOV-1994;   94US-0345516.
PR  16-DEC-1994;   94US-0357577.
PR  23-DEC-1994;   94US-0363233.
XX
PA  (RIBO-) RIBOZYME PHARM INC.
XX
PI  Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI  Grimm S,  Karpeisky A,  Kisich K,  Matulic-adamic J,  Mcswiggen JA;
PI  Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D;
PI  Thompson JD,  Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR  WPI; 1995-351090/45.
XX
PT  Ribozymes having modified bases and methods for producing them -
PT  for use in inhibiting disease related genes
XX
PS  Claim 2; Page 243; 407pp; English.
XX
CC  The present sequence represents a preferred target sequence for an
CC  enzymatic nucleic acid (i.e. a ribozyme) which cleaves TNF-alpha
CC  mRNA at the nucleotide base position indicated in the DE line.
CC  Regions of the mRNA that do not form secondary folding
CC  structures and that contain potential hammerhead and hairpin
CC  ribozyme cleavage sites were identified by computer analysis.
CC  Ribozymes directed against these mRNA sequences were designed and
CC  synthesised with modifications that improve their nuclease
CC  resistance. The ribozymes are designed to cleave the target
CC  sequences and thereby inhibit TNF-alpha expression, making them
CC  potentially useful for treating rheumatoid arthritis, septic shock
CC  and other inflammatory disorders including psoriasis, as well as
CC  for treatment of AIDS.
CC  (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ  Sequence 15 BP; 4 A; 0 C; 0 G; 11 U; 0 other;

  Query Match             0.9%;  Score 10.8;  DB 1;  Length 15;
  Best Local Similarity   85.7%;  Pred. No. 8.8e+02;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        1251 TAAACAACAAATAA 1264
               |||| || ||||||
Db          15 TAAATAATAAATAA 2


RESULT 981
AAF70070/c
ID  AAF70070 standard; DNA; 15 BP.
XX
AC  AAF70070;
XX
DT  18-APR-2001  (first entry)
XX
DE  Human TNFRSF11B gene ASO probe, SEQ ID NO: 126.
XX
KW  Human; TNFRSF11B; osteoclastogenesis inhibitory factor;
KW  single nucleotide polymorphism; SNP; osteoclast recruitment;
KW  osteoclast function; osteoporosis; metastatic bone disease;
KW  Paget's disease; rheumatoid arthritis; periodontal bone disease;
KW  ASO; allele-specific oligonucleotide; probe; ss.
XX
OS  Homo sapiens.
XX
PN  WO200104137-A1.
XX
PD  18-JAN-2001.
XX
PF  10-JUL-2000; 2000WO-US18803.
XX
PR  09-JUL-1999;   99US-0143020.
XX
PA  (GENA-) GENAISSANCE PHARM INC.
XX
PI  Chew A,  Denton RR,  Duda A,  Nandabalan K,  Stephens JC;
XX
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```
DR   WPI; 2001-147175/15.
XX
PT   Human Osteoclastogenesis Inhibitory Factor nucleotides, comprising
PT   single nucleotide polymorphisms, useful for studying e.g. osteoporosis,
PT   Paget's disease and rheumatoid arthritis -
XX
PS   Claim 15; Page 23; 114pp; English.
XX
CC   The present sequence is a probe used to detect polymorphisms in the human
CC   osteoclastogenesis inhibitory factor (TNFRSF11B). Polynucleotides
CC   comprising one or more of twenty four novel single nucleotide
CC   polymorphisms in the TNFRSF11B gene have been identified. TNFRSF11B
CC   regulate osteoclast recruitment and function. An understanding of
CC   variations in the gene should thus be useful in developing new therapies
CC   for metabolic disorders caused by abnormal osteoclast recruitment and
CC   function such as osteoporosis, metastatic bone disease, Paget's disease,
CC   rheumatoid arthritis and periodontal bone disease.
XX
SQ   Sequence 15 BP; 4 A; 0 C; 2 G; 9 T; 0 other;

  Query Match             0.9%;  Score 10.8;  DB 1;  Length 15;
  Best Local Similarity   85.7%;  Pred. No. 8.8e+02;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1612 CATTTAAAATATAA 1625
              ||| |||||||| ||
Db         14 CATCTAAAATAAAA 1


RESULT 982
ABT04008
ID   ABT04008 standard; DNA; 15 BP.
XX
AC   ABT04008;
XX
DT   25-SEP-2002  (first entry)
XX
DE   Human ovary specific coding sequence SEQ ID NO: 27.
XX
KW   Human; ovary; ovarian cancer; ovarian disease; gene therapy; gene;
KW   cytostatic; ds.
XX
OS   Homo sapiens.
XX
PN   WO200240720-A2.
XX
PD   23-MAY-2002.
XX
PF   20-NOV-2001; 2001WO-US45010.
XX
PR   20-NOV-2000; 2000US-249997P.
XX
PA   (DIAD-) DIADEXUS INC.
XX
PI   Salceda S,  Macina RA,  Recipon H,  Cafferkey R,  Sun Y,  Liu C;
XX
DR   WPI; 2002-547588/58.
XX
PT   New ovary polypeptides useful for detecting, diagnosing, monitoring,
PT   treating, staging and imaging cancers in humans having cancer and
PT   non-cancerous ovary disease -
XX
PS   Claim 1; Page 162; 296pp; English.
XX
CC   The present invention provides human proteins and coding sequences
CC   specifically found in ovary cells. These can be used in the diagnosis and
CC   treatment of ovarian diseases, including cancer. The present sequence is
CC   a coding sequence of the invention.
XX
SQ   Sequence 15 BP; 11 A; 0 C; 0 G; 4 T; 0 other;

  Query Match             0.9%;  Score 10.8;  DB 1;  Length 15;
  Best Local Similarity   85.7%;  Pred. No. 8.8e+02;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1251 TAAACAACAAATAA 1264
              |||| || ||||||
Db          1 TAAATAATAAATAA 14


RESULT 983
AAX65399
ID   AAX65399 standard; RNA; 15 BP.
XX
AC   AAX65399;
XX
DT   20-JUL-1999  (first entry)
XX
DE   Mouse B7-1 hammerhead ribozyme target SEQ ID NO:2031.
XX
KW   Arthritic condition; graft tolerance; immune response; target; cleavage;
KW   hammerhead ribozyme; hairpin ribozyme; human; rabbit; mouse; collagenase;
KW   stromelysin; synovial membrane; joint; arthritis; osteoarthritis;
KW   rheumatoid arthritis; autoimmune disease; allergy; inflammation;
KW   diagnosis; ss.
XX
OS   Mus sp.
XX
PN   WO9618736-A2.
XX
PD   20-JUN-1996.
XX
PF   22-NOV-1995;   95WO-US15516.
XX
PR   05-OCT-1995;   95US-0541365.
PR   13-DEC-1994;   94US-0354920.
PR   23-DEC-1994;   94US-0363253.
PR   23-DEC-1994;   94US-0363254.
PR   17-FEB-1995;   95US-0390850.
PR   20-APR-1995;   95US-0426124.
PR   02-MAY-1995;   95US-0432874.
PR   04-MAY-1995;   95US-0434509.
PR   07-JUL-1995;   95US-0000951.
PR   07-JUL-1995;   95US-0000974.
PR   07-AUG-1995;   95US-0512861.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Draper K,  Gustofson J,  McSwiggen J,  Pavco P,  Stinchcomb DT;
PI   Beigelman L,  Karpeisky A,  Modak A,  Usman N,  Burgin A;
PI   Matulic-Adamic J,  Jarvis T,  Thompson JD,  Wincott F;
XX
DR   WPI; 1996-300653/30.
XX
PT   Enzymatic nucleic acid molecules having a hammer-head motif - used
PT   for the treatment of arthritis, induction of graft tolerance or
PT   treatment of auto-immune diseases
XX
PS   Claim 10; Page 180; 307pp; English.
XX
CC   The present invention describes a novel enzymatic nucleic acid (ENA)
CC   having a hammerhead motif (HM) comprising: (i) at least 5 ribose
CC   residues; (ii) a 2'-C-allyl modification at position 4 of the ENA; (iii)
CC   at least ten 2'-O-methyl modifications; and (iv) a 3'-end modification.
CC   The ENA's can inhibit collagenase and stromelysin production in the
CC   synovial membrane of joints for the treatment or prevention of arthritis,
CC   particularly osteoarthritis or rheumatoid arthritis. The ENA's can also
CC   be used to treat antigen presenting cells of a donor to induce tolerance
CC   in a recipient to an alloantigen of a donor. They can also be used for
CC   enhancing graft tolerance or for treating autoimmune disease, and for
CC   treating allergies and other inflammatory conditions. The ENA's can also
CC   be used in diagnosis. Ribozyme therapy impacts on the expression of
CC   stromelysin without introducing the non-specific effects upon gene
CC   expression which accompany treatment with retinoids and dexamethasone.
CC   The concentration of ribozyme required to affect a therapeutic treatment
CC   is lower than that required of antisense molecules, and is highly
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specific. The present sequence is used in the exemplification of the present invention.

Sequence 15 BP; 9 A; 0 C; 0 G; 6 U; 0 other;

Query Match 0.9%; Score 10.8; DB 1; Length 15;
Best Local Similarity 42.9%; Pred. No. 8.8e+02;
Matches 6; Conservative 6; Mismatches 2; Indels 0; Gaps 0;

```
       1153 TTTAGATATTAAAT 1166
            : :| |:|::|||:
          1 UAUAAAUAUUAAAU 14
```

SULT 984
Z39954
AAZ39954 standard; cDNA to mRNA; 15 BP.

AAZ39954;

10-FEB-2000 (first entry)

Human interleukin-2 RNA probe L550A.

Probe; higher-order structure; structure determination; RNA structure; detection; human; interleukin-2; IL-2 RNA; ds.

Synthetic.
Homo sapiens.

JP11285386-A.

19-OCT-1999.

03-APR-1998; 98JP-0091580.

03-APR-1998; 98JP-0091580.

(BUNS-) BUNSHI BIOHOTONICS KENKYUSHO KK.

WPI; 2000-026815/03.

Detection of the higher-order structure of an RNA - by hybridising with a specific probe

Example; Page 13; 26pp; Japanese.

This sequence represents a probe for human interleukin-2 (IL-2) RNA. The invention relates to a method for the detection of the higher-order structure of an RNA, consisting of: (1) reacting the RNA with a probe (P1) having a base sequence (B1) hybridisable with A1 among the specific continuous base sequences A1 and A2 in the RNA and a probe (P2) having a base sequence (B2) hybridisable with A2 among a specific continuous base sequences A1 and A2 in the RNA; (2) detecting the continuous base sequences B1 and B2 formed by hybridising the probes P1 and P2 on the RNA; and (3) judging that: (i) the higher-order structure of the specific continuous base sequences A1 and A2 in the RNA is single-stranded when sequences B1 and B2 are detected; or (ii) the higher-order structure of the specific continuous base sequences A1 and A2 in the RNA is double-stranded when sequences B1 and B2 are not detected. The method can also detect a change in the higher-order structure of an RNA.

Sequence 15 BP; 9 A; 0 C; 0 G; 5 T; 1 other;

Query Match 0.9%; Score 10.8; DB 1; Length 15;
Best Local Similarity 80.0%; Pred. No. 8.8e+02;
Matches 12; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
       1610 AACATTTAAAATATA 1624
            || ||||||| || |
          1 AATATTTAAANTAAA 15
```

Search completed: December 18, 2003, 07:20:29
Job time : 19 secs

GenCore version 5.1.6
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M nucleic - nucleic search, using sw model

un on: December 18, 2003, 07:23:37 ; Search time 10 Seconds
(without alignments)
2.527 Million cell updates/sec

itle: us-09-960-143-3
erfect score: 1249
equence: 1 aaaaattcattctctgtggt.....atataatttgttgtcaaagt 1249

coring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

earched: 603 seqs, 10117 residues

otal number of hits satisfying chosen parameters: 1206

inimum DB seq length: 8
aximum DB seq length: 50

ost-processing: Minimum Match 0%
Maximum Match 100%
Listing first 732 summaries

atabase : rni.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

esult No.		Score	% Query Match	Length	DB	ID	Description
c	1	24	1.9	24	1	US-09-710-200-72	Sequence 72, Appl
c	2	24	1.9	24	1	US-09-975-408-72	Sequence 72, Appl
c	3	21	1.7	21	1	US-08-246-855A-16	Sequence 16, Appl
c	4	21	1.7	21	1	PCT-US95-06356-16	Sequence 16, Appl
c	5	20	1.6	20	1	US-09-046-894-11	Sequence 11, Appl
	6	17.4	1.4	21	1	US-09-165-868-8	Sequence 8, Appli
c	7	16.4	1.3	20	1	US-09-433-694-61	Sequence 61, Appl
c	8	16.2	1.3	22	1	US-08-619-542B-58	Sequence 58, Appl
	9	15.8	1.3	20	1	US-09-422-978-7355	Sequence 7355, Ap
c	10	15.6	1.2	22	1	US-08-123-449A-1	Sequence 1, Appli
c	11	15.6	1.2	22	1	US-08-123-449A-2	Sequence 2, Appli
c	12	15.6	1.2	22	1	US-08-458-050-1	Sequence 1, Appli
c	13	15.6	1.2	22	1	US-08-458-050-2	Sequence 2, Appli
c	14	15.6	1.2	22	1	US-08-950-196-1	Sequence 1, Appli
c	15	15.6	1.2	22	1	US-08-950-196-2	Sequence 2, Appli
	16	15.4	1.2	17	1	US-08-146-421-9	Sequence 9, Appli
	17	15.4	1.2	18	1	US-09-205-144-43	Sequence 43, Appl
c	18	15.4	1.2	20	1	US-09-488-744A-83	Sequence 83, Appl
	19	15.4	1.2	22	1	US-08-943-731-521	Sequence 521, App
c	20	15.2	1.2	20	1	US-07-922-723A-29	Sequence 29, Appl
c	21	15.2	1.2	20	1	US-07-799-828C-29	Sequence 29, Appl
c	22	15.2	1.2	20	1	US-07-952-277A-29	Sequence 29, Appl
c	23	15.2	1.2	20	1	US-09-780-173A-92	Sequence 92, Appl
c	24	15.2	1.2	21	1	US-08-377-687-53	Sequence 53, Appl
c	25	15.2	1.2	21	1	US-08-777-192-53	Sequence 53, Appl
c	26	15.2	1.2	21	1	US-08-971-982-53	Sequence 53, Appl
	27	14.8	1.2	20	1	US-09-357-073-33	Sequence 33, Appl
c	28	14.8	1.2	20	1	US-09-280-805-239	Sequence 239, App
	29	14.8	1.2	20	1	US-09-496-694B-239	Sequence 239, App
	30	14.8	1.2	20	1	US-09-496-694B-240	Sequence 240, App
c	31	14.8	1.2	20	1	US-09-658-687A-26	Sequence 26, Appl
c	32	14.8	1.2	21	1	US-08-261-825-7	Sequence 7, Appli
c	33	14.8	1.2	21	1	US-08-719-124-7	Sequence 7, Appli
	34	14.8	1.2	21	1	US-09-461-697-307	Sequence 307, App
c	35	14.8	1.2	21	1	US-09-422-978-10751	Sequence 10751, A
c	36	14.8	1.2	21	1	PCT-US95-07748-7	Sequence 7, Appli
c	37	14.8	1.2	21	1	PCT-US95-07748A-7	Sequence 7, Appli
	38	14.4	1.2	17	1	US-09-371-772B-4900	Sequence 4900, Ap
	39	14.2	1.1	19	1	US-09-626-929-23	Sequence 23, Appl
	40	14.2	1.1	19	1	US-09-484-850-23	Sequence 23, Appl
	41	14.2	1.1	19	1	US-09-408-392-23	Sequence 23, Appl
	42	14.2	1.1	19	1	US-09-626-930-23	Sequence 23, Appl
	43	14.2	1.1	19	1	US-09-626-528-23	Sequence 23, Appl
	44	14.2	1.1	19	1	US-09-626-595-23	Sequence 23, Appl
	45	14.2	1.1	19	1	US-09-694-863-23	Sequence 23, Appl
	46	14.2	1.1	20	1	US-08-807-104-2	Sequence 2, Appli
	47	14.2	1.1	20	1	US-09-116-780-8	Sequence 8, Appli
	48	14.2	1.1	20	1	US-08-480-068-2	Sequence 2, Appli
	49	14.2	1.1	20	1	US-09-446-504-53	Sequence 53, Appl
c	50	14.2	1.1	20	1	US-09-446-504-54	Sequence 54, Appl
c	51	14.2	1.1	20	1	US-09-021-701-864	Sequence 864, App
c	52	14.2	1.1	20	1	US-09-021-701-865	Sequence 865, App
c	53	14.2	1.1	20	1	US-09-021-701-869	Sequence 869, App
c	54	14.2	1.1	20	1	US-09-021-701-870	Sequence 870, App
	55	14.2	1.1	20	1	US-09-712-266-53	Sequence 53, Appl
c	56	14.2	1.1	20	1	US-09-712-266-54	Sequence 54, Appl
	57	14.2	1.1	20	1	US-08-973-137-2	Sequence 2, Appli
	58	14.2	1.1	20	1	US-09-705-299-21	Sequence 21, Appl
c	59	14.2	1.1	20	1	US-09-668-313A-84	Sequence 84, Appl
c	60	14.2	1.1	20	1	US-09-198-452A-5710	Sequence 5710, Ap
	61	14	1.1	15	1	US-08-311-486C-189	Sequence 189, App
	62	14	1.1	15	1	US-08-311-486C-197	Sequence 197, App
	63	14	1.1	15	1	US-08-311-486C-706	Sequence 706, App
	64	14	1.1	15	1	US-08-311-486C-707	Sequence 707, App
	65	14	1.1	15	1	US-08-311-486C-708	Sequence 708, App
	66	14	1.1	17	1	US-08-985-162-714	Sequence 714, App
c	67	14	1.1	20	1	US-08-117-952-529	Sequence 529, App
	68	14	1.1	20	1	US-09-357-073-42	Sequence 42, Appl
	69	14	1.1	20	1	US-09-198-452A-5776	Sequence 5776, Ap
c	70	13.8	1.1	17	1	US-08-373-124A-972	Sequence 972, App
c	71	13.8	1.1	17	1	US-08-373-124A-2053	Sequence 2053, Ap
c	72	13.8	1.1	17	1	US-08-435-628-972	Sequence 972, App
c	73	13.8	1.1	17	1	US-08-435-628-2053	Sequence 2053, Ap
	74	13.8	1.1	17	1	US-09-468-265-23	Sequence 23, Appl
	75	13.8	1.1	17	1	US-09-371-772B-5585	Sequence 5585, Ap
	76	13.8	1.1	18	1	US-09-422-978-9394	Sequence 9394, Ap
	77	13.8	1.1	18	1	US-09-422-978-9399	Sequence 9399, Ap
	78	13.8	1.1	19	1	US-08-487-759-1	Sequence 1, Appli
	79	13.8	1.1	19	1	US-08-807-104-1	Sequence 1, Appli
	80	13.8	1.1	19	1	US-08-807-104-4	Sequence 4, Appli
	81	13.8	1.1	19	1	US-08-807-104-6	Sequence 6, Appli
	82	13.8	1.1	19	1	US-08-807-104-7	Sequence 7, Appli
	83	13.8	1.1	19	1	US-08-807-104-8	Sequence 8, Appli
	84	13.8	1.1	19	1	US-08-807-104-9	Sequence 9, Appli
	85	13.8	1.1	19	1	US-08-807-104-10	Sequence 10, Appl
	86	13.8	1.1	19	1	US-08-807-104-13	Sequence 13, Appl
	87	13.8	1.1	19	1	US-08-807-104-14	Sequence 14, Appl
	88	13.8	1.1	19	1	US-08-807-104-15	Sequence 15, Appl
	89	13.8	1.1	19	1	US-08-807-104-16	Sequence 16, Appl
	90	13.8	1.1	19	1	US-08-973-139-1	Sequence 1, Appli
	91	13.8	1.1	19	1	US-08-480-068-1	Sequence 1, Appli
	92	13.8	1.1	19	1	US-08-480-068-4	Sequence 4, Appli
	93	13.8	1.1	19	1	US-08-480-068-6	Sequence 6, Appli
	94	13.8	1.1	19	1	US-08-480-068-7	Sequence 7, Appli
	95	13.8	1.1	19	1	US-08-480-068-8	Sequence 8, Appli
	96	13.8	1.1	19	1	US-08-480-068-9	Sequence 9, Appli
	97	13.8	1.1	19	1	US-08-480-068-10	Sequence 10, Appl
	98	13.8	1.1	19	1	US-08-480-068-13	Sequence 13, Appl
	99	13.8	1.1	19	1	US-08-480-068-14	Sequence 14, Appl
	100	13.8	1.1	19	1	US-08-480-068-15	Sequence 15, Appl
	101	13.8	1.1	19	1	US-08-480-068-16	Sequence 16, Appl
	102	13.8	1.1	19	1	US-08-973-137-1	Sequence 1, Appli
	103	13.8	1.1	19	1	US-08-973-137-4	Sequence 4, Appli
	104	13.8	1.1	19	1	US-08-973-137-6	Sequence 6, Appli
	105	13.8	1.1	19	1	US-08-973-137-7	Sequence 7, Appli
	106	13.8	1.1	19	1	US-08-973-137-8	Sequence 8, Appli

	107	13.8	1.1	19	1	US-08-973-137-9	Sequence 9, Appli
	108	13.8	1.1	19	1	US-08-973-137-10	Sequence 10, Appl
	109	13.8	1.1	19	1	US-08-973-137-13	Sequence 13, Appl
	110	13.8	1.1	19	1	US-08-973-137-14	Sequence 14, Appl
	111	13.8	1.1	19	1	US-08-973-137-15	Sequence 15, Appl
	112	13.8	1.1	19	1	US-08-973-137-16	Sequence 16, Appl
	113	13.8	1.1	19	1	US-09-422-978-8817	Sequence 8817, Ap
	114	13.8	1.1	19	1	PCT-US93-02259-7	Sequence 7, Appli
	115	13.8	1.1	19	1	PCT-US93-02259-8	Sequence 8, Appli
	116	13.8	1.1	19	1	PCT-US96-08320-1	Sequence 1, Appli
	117	13.8	1.1	19	1	PCT-US96-08330-1	Sequence 1, Appli
	118	13.6	1.1	22	1	US-08-123-449A-1	Sequence 1, Appli
	119	13.6	1.1	22	1	US-08-123-449A-2	Sequence 2, Appli
	120	13.6	1.1	22	1	US-08-458-050-1	Sequence 1, Appli
	121	13.6	1.1	22	1	US-08-458-050-2	Sequence 2, Appli
	122	13.6	1.1	22	1	US-08-950-196-1	Sequence 1, Appli
	123	13.6	1.1	22	1	US-08-950-196-2	Sequence 2, Appli
c	124	13.4	1.1	15	1	US-08-242-402-5	Sequence 5, Appli
	125	13.4	1.1	15	1	US-08-242-402-21	Sequence 21, Appl
	126	13.4	1.1	15	1	US-08-270-180-6	Sequence 6, Appli
	127	13.4	1.1	15	1	US-08-311-486C-190	Sequence 190, App
	128	13.4	1.1	15	1	US-08-311-486C-191	Sequence 191, App
	129	13.4	1.1	15	1	US-08-311-486C-192	Sequence 192, App
	130	13.4	1.1	15	1	US-08-311-486C-198	Sequence 198, App
	131	13.4	1.1	15	1	US-08-311-486C-199	Sequence 199, App
	132	13.4	1.1	15	1	US-08-311-486C-200	Sequence 200, App
	133	13.4	1.1	15	1	US-08-311-486C-201	Sequence 201, App
	134	13.4	1.1	15	1	US-08-311-486C-709	Sequence 709, App
	135	13.4	1.1	15	1	US-08-311-486C-710	Sequence 710, App
	136	13.4	1.1	15	1	US-08-311-486C-711	Sequence 711, App
	137	13.4	1.1	15	1	US-08-311-486C-712	Sequence 712, App
	138	13.4	1.1	15	1	US-08-311-486C-713	Sequence 713, App
	139	13.4	1.1	15	1	US-08-311-486C-714	Sequence 714, App
	140	13.4	1.1	15	1	US-08-311-486C-715	Sequence 715, App
	141	13.4	1.1	15	1	US-08-311-486C-716	Sequence 716, App
	142	13.4	1.1	15	1	US-08-311-486C-721	Sequence 721, App
c	143	13.4	1.1	15	1	US-08-500-635A-13	Sequence 13, Appl
	144	13.4	1.1	15	1	US-08-682-423-6	Sequence 6, Appli
c	145	13.4	1.1	15	1	US-08-682-423-21	Sequence 21, Appl
c	146	13.4	1.1	15	1	US-09-167-151-13	Sequence 13, Appl
	147	13.4	1.1	15	1	PCT-US95-05141-6	Sequence 6, Appli
c	148	13.4	1.1	15	1	PCT-US95-05141-21	Sequence 21, Appl
	149	13.4	1.1	16	1	US-08-242-402-7	Sequence 7, Appli
c	150	13.4	1.1	16	1	US-08-242-402-12	Sequence 12, Appl
	151	13.4	1.1	16	1	US-08-682-423-22	Sequence 22, Appl
c	152	13.4	1.1	16	1	US-08-682-423-25	Sequence 25, Appl
	153	13.4	1.1	16	1	PCT-US95-05141-22	Sequence 22, Appl
c	154	13.4	1.1	16	1	PCT-US95-05141-25	Sequence 25, Appl
c	155	13.4	1.1	17	1	US-08-281-940-54	Sequence 54, Appl
c	156	13.4	1.1	17	1	US-08-373-124A-970	Sequence 970, App
c	157	13.4	1.1	17	1	US-08-373-124A-2051	Sequence 2051, Ap
c	158	13.4	1.1	17	1	US-08-435-628-970	Sequence 970, App
c	159	13.4	1.1	17	1	US-08-435-628-2051	Sequence 2051, Ap
c	160	13.4	1.1	17	1	US-08-710-134-54	Sequence 54, Appl
c	161	13.4	1.1	17	1	US-08-485-885-54	Sequence 54, Appl
c	162	13.4	1.1	17	1	US-08-584-040-2299	Sequence 2299, Ap
	163	13.4	1.1	17	1	US-08-584-040-2785	Sequence 2785, Ap
c	164	13.4	1.1	17	1	US-08-584-040-7818	Sequence 7818, Ap
c	165	13.4	1.1	17	1	US-09-371-772B-844	Sequence 844, App
	166	13.4	1.1	17	1	US-09-371-772B-1309	Sequence 1309, Ap
c	167	13.4	1.1	17	1	US-09-371-772B-3602	Sequence 3602, Ap
c	168	13.4	1.1	17	1	US-09-371-772B-5228	Sequence 5228, Ap
	169	13.4	1.1	17	1	US-09-371-772B-5584	Sequence 5584, Ap
	170	13.4	1.1	18	1	US-09-213-768-31	Sequence 31, Appl
	171	13.4	1.1	18	1	US-09-316-083-22	Sequence 22, Appl
	172	13.4	1.1	18	1	US-09-933-700-22	Sequence 22, Appl
c	173	13.4	1.1	19	1	US-08-222-177A-345	Sequence 345, App
	174	13.4	1.1	19	1	US-08-468-551-8	Sequence 8, Appli
	175	13.4	1.1	19	1	US-09-422-978-4969	Sequence 4969, Ap
c	176	13.2	1.1	18	1	US-08-271-942A-92	Sequence 92, Appl
c	177	13.2	1.1	18	1	US-08-779-916A-92	Sequence 92, Appl
c	178	13.2	1.1	18	1	US-09-474-922A-81	Sequence 81, Appl
c	179	13.2	1.1	18	1	US-09-637-751A-6	Sequence 6, Appli
	180	13.2	1.1	18	1	US-09-144-367-15	Sequence 15, Appl
	181	13.2	1.1	18	1	US-09-144-367-29	Sequence 29, Appl
	182	13.2	1.1	18	1	US-09-475-947A-260	Sequence 260, App
c	183	13.2	1.1	18	1	US-09-422-978-5436	Sequence 5436, Ap
	184	13.2	1.1	18	1	US-09-068-506-71	Sequence 71, Appl
c	185	13.2	1.1	18	1	PCT-US95-08604-92	Sequence 92, Appl
c	186	13	1.0	14	1	US-08-435-605A-48	Sequence 48, Appl
c	187	13	1.0	14	1	US-08-882-649A-9	Sequence 9, Appli
c	188	13	1.0	15	1	US-08-334-847-510	Sequence 510, App
	189	13	1.0	15	1	US-08-311-486C-188	Sequence 188, App
	190	13	1.0	15	1	US-08-311-486C-196	Sequence 196, App
	191	13	1.0	15	1	US-08-311-486C-705	Sequence 705, App
	192	13	1.0	15	1	US-08-311-486C-720	Sequence 720, App
c	193	13	1.0	17	1	US-07-977-284A-168	Sequence 168, App
	194	13	1.0	17	1	US-08-249-037C-17	Sequence 17, Appl
c	195	13	1.0	17	1	US-08-256-426B-168	Sequence 168, App
	196	13	1.0	17	1	US-08-788-622B-17	Sequence 17, Appl
	197	13	1.0	17	1	US-08-985-162-514	Sequence 514, App
	198	13	1.0	17	1	US-08-985-162-515	Sequence 515, App
	199	13	1.0	17	1	US-08-985-162-516	Sequence 516, App
	200	13	1.0	17	1	US-08-985-162-517	Sequence 517, App
	201	13	1.0	17	1	US-08-788-621B-17	Sequence 17, Appl
c	202	12.8	1.0	16	1	US-09-067-773-28	Sequence 28, Appl
c	203	12.8	1.0	17	1	US-08-373-124A-974	Sequence 974, App
	204	12.8	1.0	17	1	US-08-373-124A-2037	Sequence 2037, Ap
c	205	12.8	1.0	17	1	US-08-373-124A-2055	Sequence 2055, Ap
	206	12.8	1.0	17	1	US-08-373-124A-2153	Sequence 2153, Ap
	207	12.8	1.0	17	1	US-08-373-124A-2155	Sequence 2155, Ap
c	208	12.8	1.0	17	1	US-08-435-628-974	Sequence 974, App
	209	12.8	1.0	17	1	US-08-435-628-2037	Sequence 2037, Ap
c	210	12.8	1.0	17	1	US-08-435-628-2055	Sequence 2055, Ap
	211	12.8	1.0	17	1	US-08-435-628-2153	Sequence 2153, Ap
	212	12.8	1.0	17	1	US-08-435-628-2155	Sequence 2155, Ap
c	213	12.8	1.0	17	1	US-08-527-060-23	Sequence 23, Appl
	214	12.8	1.0	17	1	US-08-292-620A-1983	Sequence 1983, Ap
c	215	12.8	1.0	17	1	US-09-067-773-29	Sequence 29, Appl
c	216	12.8	1.0	17	1	US-08-988-706-17	Sequence 17, Appl
c	217	12.8	1.0	17	1	US-08-988-706-18	Sequence 18, Appl
	218	12.8	1.0	17	1	US-09-071-845-1983	Sequence 1983, Ap
c	219	12.8	1.0	17	1	US-08-584-040-2166	Sequence 2166, Ap
c	220	12.8	1.0	17	1	US-08-584-040-2556	Sequence 2556, Ap
c	221	12.8	1.0	17	1	US-08-584-040-2557	Sequence 2557, Ap
c	222	12.8	1.0	17	1	US-08-584-040-2828	Sequence 2828, Ap
	223	12.8	1.0	17	1	US-08-584-040-3850	Sequence 3850, Ap
	224	12.8	1.0	17	1	US-08-584-040-4225	Sequence 4225, Ap
	225	12.8	1.0	17	1	US-08-584-040-4226	Sequence 4226, Ap
	226	12.8	1.0	17	1	US-09-306-420C-2	Sequence 2, Appli
	227	12.8	1.0	17	1	US-09-306-420C-4	Sequence 4, Appli
c	228	12.8	1.0	17	1	US-09-371-772B-711	Sequence 711, App
c	229	12.8	1.0	17	1	US-09-371-772B-1080	Sequence 1080, Ap
c	230	12.8	1.0	17	1	US-09-371-772B-1081	Sequence 1081, Ap
c	231	12.8	1.0	17	1	US-09-371-772B-1352	Sequence 1352, Ap
	232	12.8	1.0	17	1	US-09-371-772B-1617	Sequence 1617, Ap
	233	12.8	1.0	17	1	US-09-371-772B-1992	Sequence 1992, Ap
	234	12.8	1.0	17	1	US-09-371-772B-1993	Sequence 1993, Ap
	235	12.8	1.0	17	1	US-09-371-772B-4747	Sequence 4747, Ap
c	236	12.8	1.0	17	1	US-09-371-772B-5267	Sequence 5267, Ap
c	237	12.8	1.0	17	1	US-09-371-772B-6945	Sequence 6945, Ap
c	238	12.8	1.0	17	1	US-09-371-772B-6946	Sequence 6946, Ap
c	239	12.8	1.0	18	1	US-08-867-941-37	Sequence 37, Appl
c	240	12.8	1.0	18	1	US-09-200-141-22	Sequence 22, Appl
c	241	12.8	1.0	18	1	US-09-339-964-42	Sequence 42, Appl
c	242	12.8	1.0	18	1	US-09-156-807-47	Sequence 47, Appl
c	243	12.8	1.0	18	1	US-09-289-377-22	Sequence 22, Appl
c	244	12.8	1.0	18	1	US-09-074-658-37	Sequence 37, Appl
	245	12.8	1.0	18	1	US-08-930-117-5	Sequence 5, Appli
	246	12.8	1.0	18	1	US-09-721-822A-112	Sequence 112, App
c	247	12.8	1.0	18	1	US-09-387-341-149	Sequence 149, App
	248	12.8	1.0	18	1	US-08-745-485A-15	Sequence 15, Appl
c	249	12.8	1.0	18	1	US-08-745-485A-16	Sequence 16, Appl
c	250	12.8	1.0	18	1	US-09-425-233-12	Sequence 12, Appl
	251	12.8	1.0	18	1	US-09-319-588C-35	Sequence 35, Appl
	252	12.8	1.0	18	1	US-09-319-588C-91	Sequence 91, Appl

; 253	12.8	1.0	18	1	US-09-422-978-5250	Sequence 5250, Ap
254	12.8	1.0	18	1	US-09-422-978-6086	Sequence 6086, Ap
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; 256	12.4	1.0	14	1	US-08-646-789A-4	Sequence 4, Appli
; 257	12.4	1.0	14	1	US-08-646-789A-79	Sequence 79, Appl
258	12.4	1.0	14	1	US-08-617-010C-14	Sequence 14, Appl
259	12.4	1.0	14	1	US-09-566-591-14	Sequence 14, Appl
260	12.4	1.0	14	1	US-09-054-832-37	Sequence 37, Appl
261	12.4	1.0	14	1	US-08-744-481A-24	Sequence 24, Appl
262	12.4	1.0	14	1	US-09-640-953-37	Sequence 37, Appl
263	12.4	1.0	15	1	US-08-319-492B-160	Sequence 160, App
264	12.4	1.0	15	1	US-08-319-492B-161	Sequence 161, App
; 265	12.4	1.0	15	1	US-08-088-658-52	Sequence 52, Appl
; 266	12.4	1.0	15	1	US-08-334-847-325	Sequence 325, App
267	12.4	1.0	15	1	US-08-317-432A-4	Sequence 4, Appli
268	12.4	1.0	15	1	US-08-311-486C-193	Sequence 193, App
269	12.4	1.0	15	1	US-08-311-486C-202	Sequence 202, App
270	12.4	1.0	15	1	US-08-311-486C-717	Sequence 717, App
271	12.4	1.0	15	1	US-08-292-620A-217	Sequence 217, App
272	12.4	1.0	15	1	US-08-292-620A-511	Sequence 511, App
273	12.4	1.0	15	1	US-08-292-620A-751	Sequence 751, App
274	12.4	1.0	15	1	US-08-604-871-3	Sequence 3, Appli
; 275	12.4	1.0	15	1	US-08-604-871-4	Sequence 4, Appli
; 276	12.4	1.0	15	1	US-08-585-684B-893	Sequence 893, App
; 277	12.4	1.0	15	1	US-08-585-684B-2060	Sequence 2060, Ap
; 278	12.4	1.0	15	1	US-08-471-907A-52	Sequence 52, Appl
279	12.4	1.0	15	1	US-09-071-845-217	Sequence 217, App
280	12.4	1.0	15	1	US-09-071-845-511	Sequence 511, App
281	12.4	1.0	15	1	US-09-071-845-751	Sequence 751, App
; 282	12.4	1.0	15	1	US-09-038-073-893	Sequence 893, App
; 283	12.4	1.0	15	1	US-09-038-073-2060	Sequence 2060, Ap
284	12.4	1.0	15	1	US-09-167-375-13	Sequence 13, Appl
; 285	12.4	1.0	15	1	US-09-167-375-14	Sequence 14, Appl
286	12.4	1.0	15	1	US-09-194-679-12	Sequence 12, Appl
287	12.4	1.0	15	1	US-08-584-040-8488	Sequence 8488, Ap
288	12.4	1.0	15	1	US-09-475-947A-180	Sequence 180, App
289	12.4	1.0	15	1	US-09-371-772B-4142	Sequence 4142, Ap
290	12.4	1.0	16	1	US-08-962-690-21	Sequence 21, Appl
291	12.4	1.0	16	1	US-09-371-772B-5877	Sequence 5877, Ap
; 292	12.4	1.0	17	1	US-08-390-850-428	Sequence 428, App
; 293	12.4	1.0	17	1	US-08-373-124A-1437	Sequence 1437, Ap
; 294	12.4	1.0	17	1	US-08-435-634-428	Sequence 428, App
; 295	12.4	1.0	17	1	US-08-435-628-1437	Sequence 1437, Ap
296	12.4	1.0	17	1	US-08-985-162-198	Sequence 198, App
297	12.4	1.0	17	1	US-08-584-040-1838	Sequence 1838, Ap
298	12.4	1.0	17	1	US-08-584-040-2078	Sequence 2078, Ap
299	12.4	1.0	17	1	US-08-584-040-2373	Sequence 2373, Ap
300	12.4	1.0	17	1	US-08-584-040-2374	Sequence 2374, Ap
301	12.4	1.0	17	1	US-08-584-040-3849	Sequence 3849, Ap
302	12.4	1.0	17	1	US-08-584-040-4227	Sequence 4227, Ap
; 303	12.4	1.0	17	1	US-08-584-040-5646	Sequence 5646, Ap
304	12.4	1.0	17	1	US-08-584-040-7532	Sequence 7532, Ap
; 305	12.4	1.0	17	1	US-08-584-040-7817	Sequence 7817, Ap
; 306	12.4	1.0	17	1	US-08-584-040-7819	Sequence 7819, Ap
307	12.4	1.0	17	1	US-09-371-772B-383	Sequence 383, App
308	12.4	1.0	17	1	US-09-371-772B-623	Sequence 623, App
309	12.4	1.0	17	1	US-09-371-772B-918	Sequence 918, App
310	12.4	1.0	17	1	US-09-371-772B-919	Sequence 919, App
311	12.4	1.0	17	1	US-09-371-772B-1616	Sequence 1616, Ap
312	12.4	1.0	17	1	US-09-371-772B-1994	Sequence 1994, Ap
; 313	12.4	1.0	17	1	US-09-371-772B-2536	Sequence 2536, Ap
; 314	12.4	1.0	17	1	US-09-371-772B-3601	Sequence 3601, Ap
; 315	12.4	1.0	17	1	US-09-371-772B-3603	Sequence 3603, Ap
316	12.4	1.0	17	1	US-09-371-772B-4746	Sequence 4746, Ap
; 317	12.4	1.0	17	1	US-09-371-772B-5229	Sequence 5229, Ap
; 318	12.4	1.0	17	1	US-09-371-772B-5266	Sequence 5266, Ap
319	12.4	1.0	17	1	US-09-371-772B-5290	Sequence 5290, Ap
320	12.2	1.0	17	1	US-08-233-130A-10	Sequence 10, Appl
; 321	12.2	1.0	17	1	US-08-233-130A-11	Sequence 11, Appl
322	12.2	1.0	17	1	US-08-373-124A-742	Sequence 742, App
323	12.2	1.0	17	1	US-08-373-124A-792	Sequence 792, App
; 324	12.2	1.0	17	1	US-08-373-124A-792	Sequence 792, App
; 325	12.2	1.0	17	1	US-08-373-124A-960	Sequence 960, App
c 326	12.2	1.0	17	1	US-08-373-124A-962	Sequence 962, App
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c 329	12.2	1.0	17	1	US-08-373-124A-1058	Sequence 1058, Ap
330	12.2	1.0	17	1	US-08-373-124A-1871	Sequence 1871, Ap
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c 332	12.2	1.0	17	1	US-08-373-124A-1901	Sequence 1901, Ap
c 333	12.2	1.0	17	1	US-08-373-124A-1983	Sequence 1983, Ap
334	12.2	1.0	17	1	US-08-373-124A-2147	Sequence 2147, Ap
335	12.2	1.0	17	1	US-08-373-124A-2149	Sequence 2149, Ap
336	12.2	1.0	17	1	US-08-373-124A-2151	Sequence 2151, Ap
337	12.2	1.0	17	1	US-08-373-124A-2157	Sequence 2157, Ap
c 338	12.2	1.0	17	1	US-08-373-124A-2397	Sequence 2397, Ap
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c 341	12.2	1.0	17	1	US-08-435-628-792	Sequence 792, App
c 342	12.2	1.0	17	1	US-08-435-628-960	Sequence 960, App
c 343	12.2	1.0	17	1	US-08-435-628-962	Sequence 962, App
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351	12.2	1.0	17	1	US-08-435-628-2147	Sequence 2147, Ap
352	12.2	1.0	17	1	US-08-435-628-2149	Sequence 2149, Ap
353	12.2	1.0	17	1	US-08-435-628-2151	Sequence 2151, Ap
354	12.2	1.0	17	1	US-08-435-628-2157	Sequence 2157, Ap
c 355	12.2	1.0	17	1	US-08-435-628-2397	Sequence 2397, Ap
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357	12.2	1.0	17	1	US-08-292-620A-1845	Sequence 1845, Ap
358	12.2	1.0	17	1	US-08-292-620A-1989	Sequence 1989, Ap
359	12.2	1.0	17	1	US-08-292-620A-2007	Sequence 2007, Ap
360	12.2	1.0	17	1	US-08-292-620A-2009	Sequence 2009, Ap
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362	12.2	1.0	17	1	US-08-467-963C-30	Sequence 30, Appl
363	12.2	1.0	17	1	US-08-838-189D-30	Sequence 30, Appl
364	12.2	1.0	17	1	US-08-852-344D-30	Sequence 30, Appl
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c 367	12.2	1.0	17	1	US-08-985-162-265	Sequence 265, App
c 368	12.2	1.0	17	1	US-08-985-162-775	Sequence 775, App
369	12.2	1.0	17	1	US-08-923-558-4	Sequence 4, Appli
c 370	12.2	1.0	17	1	US-08-913-833-84	Sequence 84, Appl
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374	12.2	1.0	17	1	US-09-071-845-2007	Sequence 2007, Ap
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c 387	12.2	1.0	17	1	US-08-584-040-2555	Sequence 2555, Ap
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c 391	12.2	1.0	17	1	US-08-584-040-2794	Sequence 2794, Ap
c 392	12.2	1.0	17	1	US-08-584-040-2827	Sequence 2827, Ap
c 393	12.2	1.0	17	1	US-08-584-040-2857	Sequence 2857, Ap
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c 448	12	1.0	15	1	US-08-319-492B-178	Sequence 178, App
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c 468	12	1.0	15	1	US-09-071-845-578	Sequence 578, App
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475	12	1.0	17	1	US-08-985-162-197	Sequence 197, App
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497	11.8	0.9	15	1	US-08-319-492B-113	Sequence 113, App
498	11.8	0.9	15	1	US-08-319-492B-164	Sequence 164, App
499	11.8	0.9	15	1	US-08-319-492B-165	Sequence 165, App
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c 502	11.8	0.9	15	1	US-08-319-492B-520	Sequence 520, App
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c 506	11.8	0.9	15	1	US-08-334-847-326	Sequence 326, App
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518	11.8	0.9	15	1	US-08-832-021-41	Sequence 41, Appl
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520	11.8	0.9	15	1	US-09-179-665-10	Sequence 10, Appl
c 521	11.8	0.9	15	1	US-09-038-073-154	Sequence 154, App
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: 578	11.6	0.9	19	1	US-08-973-137-6	Sequence 6, Appli
: 579	11.6	0.9	19	1	US-08-973-137-7	Sequence 7, Appli
: 580	11.6	0.9	19	1	US-08-973-137-8	Sequence 8, Appli
: 581	11.6	0.9	19	1	US-08-973-137-9	Sequence 9, Appli
: 582	11.6	0.9	19	1	US-08-973-137-10	Sequence 10, Appl
: 583	11.6	0.9	19	1	US-08-973-137-13	Sequence 13, Appl
: 584	11.6	0.9	19	1	US-08-973-137-14	Sequence 14, Appl
: 585	11.6	0.9	19	1	US-08-973-137-15	Sequence 15, Appl
: 586	11.6	0.9	19	1	US-08-973-137-16	Sequence 16, Appl
: 587	11.6	0.9	19	1	PCT-US96-08320-1	Sequence 1, Appli
: 588	11.6	0.9	19	1	PCT-US96-08330-1	Sequence 1, Appli
589	11.6	0.9	20	1	US-09-433-694-61	Sequence 61, Appl
590	11.6	0.9	20	1	US-09-658-687A-26	Sequence 26, Appl
: 591	11.6	0.9	20	1	US-08-807-104-2	Sequence 2, Appli
: 592	11.6	0.9	20	1	US-08-480-068-2	Sequence 2, Appli
: 593	11.6	0.9	20	1	US-08-973-137-2	Sequence 2, Appli
594	11.4	0.9	13	1	US-08-233-130A-1	Sequence 1, Appli
595	11.4	0.9	13	1	US-08-496-631-4	Sequence 4, Appli
: 596	11.4	0.9	13	1	US-08-441-887A-124	Sequence 124, App
597	11.4	0.9	13	1	US-09-183-846A-12	Sequence 12, Appl
598	11.4	0.9	13	1	US-08-961-578C-12	Sequence 12, Appl
599	11.4	0.9	14	1	US-08-551-275-7	Sequence 7, Appli
: 600	11.4	0.9	14	1	US-08-715-568A-7	Sequence 7, Appli
601	11.4	0.9	14	1	US-08-913-833-146	Sequence 146, App
602	11.4	0.9	14	1	US-08-872-917-6	Sequence 6, Appli
603	11.4	0.9	14	1	US-09-194-679-11	Sequence 11, Appl
604	11.4	0.9	14	1	US-09-580-794C-146	Sequence 146, App
605	11.4	0.9	14	1	US-08-535-249-110	Sequence 110, App
606	11.4	0.9	14	1	US-09-475-947A-148	Sequence 148, App
607	11.4	0.9	14	1	US-09-475-947A-310	Sequence 310, App
: 608	11.4	0.9	15	1	US-08-479-248-10	Sequence 10, Appl
609	11.4	0.9	15	1	US-08-319-492B-114	Sequence 114, App
610	11.4	0.9	15	1	US-08-319-492B-115	Sequence 115, App
611	11.4	0.9	15	1	US-08-319-492B-122	Sequence 122, App
: 612	11.4	0.9	15	1	US-08-334-847-42	Sequence 42, Appl
: 613	11.4	0.9	15	1	US-08-334-847-43	Sequence 43, Appl
: 614	11.4	0.9	15	1	US-08-440-787A-117	Sequence 117, App
615	11.4	0.9	15	1	US-08-671-071B-4	Sequence 4, Appli
616	11.4	0.9	15	1	US-08-311-486C-203	Sequence 203, App
617	11.4	0.9	15	1	US-08-311-486C-700	Sequence 700, App
618	11.4	0.9	15	1	US-08-311-486C-701	Sequence 701, App
619	11.4	0.9	15	1	US-08-311-486C-722	Sequence 722, App
c 620	11.4	0.9	15	1	US-08-292-620A-149	Sequence 149, App
621	11.4	0.9	15	1	US-08-292-620A-218	Sequence 218, App
622	11.4	0.9	15	1	US-08-292-620A-512	Sequence 512, App
623	11.4	0.9	15	1	US-08-292-620A-513	Sequence 513, App
624	11.4	0.9	15	1	US-08-292-620A-516	Sequence 516, App
625	11.4	0.9	15	1	US-08-292-620A-518	Sequence 518, App
626	11.4	0.9	15	1	US-08-292-620A-576	Sequence 576, App
c 627	11.4	0.9	15	1	US-08-585-684B-894	Sequence 894, App
c 628	11.4	0.9	15	1	US-08-716-308-14	Sequence 14, Appl
c 629	11.4	0.9	15	1	US-08-466-860-58	Sequence 58, Appl
c 630	11.4	0.9	15	1	US-08-544-381B-104	Sequence 104, App
631	11.4	0.9	15	1	US-08-913-833-30	Sequence 30, Appl
632	11.4	0.9	15	1	US-08-913-833-148	Sequence 148, App
c 633	11.4	0.9	15	1	US-08-472-040A-58	Sequence 58, Appl
c 634	11.4	0.9	15	1	US-09-071-845-149	Sequence 149, App
635	11.4	0.9	15	1	US-09-071-845-218	Sequence 218, App
636	11.4	0.9	15	1	US-09-071-845-512	Sequence 512, App
637	11.4	0.9	15	1	US-09-071-845-513	Sequence 513, App
638	11.4	0.9	15	1	US-09-071-845-516	Sequence 516, App
639	11.4	0.9	15	1	US-09-071-845-518	Sequence 518, App
640	11.4	0.9	15	1	US-09-071-845-576	Sequence 576, App
641	11.4	0.9	15	1	US-08-952-376-3	Sequence 3, Appli
c 642	11.4	0.9	15	1	US-09-038-073-894	Sequence 894, App
c 643	11.4	0.9	15	1	US-08-276-776-58	Sequence 58, Appl
c 644	11.4	0.9	15	1	US-08-471-209-58	Sequence 58, Appl
645	11.4	0.9	15	1	US-09-253-977-4	Sequence 4, Appli
646	11.4	0.9	15	1	US-09-580-794C-30	Sequence 30, Appl
647	11.4	0.9	15	1	US-09-580-794C-148	Sequence 148, App
c 648	11.4	0.9	15	1	US-09-081-646-236	Sequence 236, App
649	11.4	0.9	15	1	US-09-081-646-575	Sequence 575, App
c 650	11.4	0.9	15	1	US-09-423-233-40	Sequence 40, Appl
651	11.4	0.9	15	1	US-09-446-301A-36	Sequence 36, Appl
652	11.4	0.9	15	1	US-09-099-932-40	Sequence 40, Appl
c 653	11.4	0.9	16	1	US-08-281-106-46	Sequence 46, Appl
c 654	11.4	0.9	16	1	US-08-403-634-27	Sequence 27, Appl
655	11.4	0.9	16	1	US-08-551-275-6	Sequence 6, Appli
c 656	11.4	0.9	16	1	US-08-501-968-36	Sequence 36, Appl
657	11.4	0.9	16	1	US-08-485-942A-87	Sequence 87, Appl
658	11.4	0.9	16	1	US-08-913-833-149	Sequence 149, App
659	11.4	0.9	16	1	US-08-488-214A-87	Sequence 87, Appl
660	11.4	0.9	16	1	US-08-488-208A-87	Sequence 87, Appl
c 661	11.4	0.9	16	1	US-08-913-441B-27	Sequence 27, Appl
662	11.4	0.9	16	1	US-08-483-211A-87	Sequence 87, Appl
c 663	11.4	0.9	16	1	US-09-303-029A-2	Sequence 2, Appli
664	11.4	0.9	16	1	US-09-580-794C-149	Sequence 149, App
665	11.4	0.9	16	1	US-08-488-223A-87	Sequence 87, Appl
666	11.4	0.9	16	1	US-08-438-431A-87	Sequence 87, Appl
c 667	11.4	0.9	16	1	US-08-535-249-17	Sequence 17, Appl
668	11.4	0.9	16	1	US-08-488-225A-87	Sequence 87, Appl
c 669	11.4	0.9	16	1	US-09-199-269-46	Sequence 46, Appl
c 670	11.4	0.9	16	1	US-09-602-586-2	Sequence 2, Appli
c 671	11.4	0.9	16	1	US-09-371-772B-5689	Sequence 5689, Ap
c 672	11.4	0.9	16	1	US-09-371-772B-5928	Sequence 5928, Ap
c 673	11.4	0.9	16	1	US-09-371-772B-5976	Sequence 5976, Ap
674	11.4	0.9	16	1	US-09-371-772B-6014	Sequence 6014, Ap
c 675	11.4	0.9	16	1	PCT-US96-10984-36	Sequence 36, Appl
c 676	11.4	0.9	17	1	US-08-584-040-2785	Sequence 2785, Ap
c 677	11.4	0.9	17	1	US-09-371-772B-1309	Sequence 1309, Ap
c 678	11.4	0.9	17	1	US-09-371-772B-5584	Sequence 5584, Ap
c 679	11.4	0.9	17	1	US-08-584-040-7962	Sequence 7962, Ap
c 680	11.4	0.9	17	1	US-09-371-772B-3745	Sequence 3745, Ap
681	11.4	0.9	20	1	US-09-488-744A-83	Sequence 83, Appl
c 682	11.2	0.9	16	1	US-08-242-402-7	Sequence 7, Appli
c 683	11.2	0.9	16	1	US-08-682-423-22	Sequence 22, Appl
c 684	11.2	0.9	16	1	PCT-US95-05141-22	Sequence 22, Appl
c 685	11.2	0.9	17	1	US-08-146-421-9	Sequence 9, Appli
c 686	11.2	0.9	17	1	US-08-584-040-1838	Sequence 1838, Ap
c 687	11.2	0.9	17	1	US-08-584-040-7532	Sequence 7532, Ap
c 688	11.2	0.9	17	1	US-09-371-772B-383	Sequence 383, App
689	11.2	0.9	17	1	US-08-373-124A-960	Sequence 960, App
c 690	11.2	0.9	17	1	US-08-373-124A-2149	Sequence 2149, Ap

	691	11.2	0.9	17	1	US-08-435-628-960 Sequence 960, App
c	692	11.2	0.9	17	1	US-08-435-628-2149 Sequence 2149, Ap
c	693	11.2	0.9	17	1	US-08-292-620A-1845 Sequence 1845, Ap
c	694	11.2	0.9	17	1	US-08-292-620A-1989 Sequence 1989, Ap
c	695	11.2	0.9	17	1	US-08-534-454-1 Sequence 1, Appli
c	696	11.2	0.9	17	1	US-08-855-058-1 Sequence 1, Appli
c	697	11.2	0.9	17	1	US-09-071-845-1845 Sequence 1845, Ap
c	698	11.2	0.9	17	1	US-09-071-845-1989 Sequence 1989, Ap
c	699	11.2	0.9	17	1	US-09-141-286-1 Sequence 1, Appli
	700	11.2	0.9	17	1	US-09-300-958A-63 Sequence 63, Appl
	701	11.2	0.9	18	1	US-09-474-922A-81 Sequence 81, Appl
	702	11	0.9	17	1	US-08-373-124A-972 Sequence 972, App
	703	11	0.9	17	1	US-08-373-124A-2053 Sequence 2053, Ap
	704	11	0.9	17	1	US-08-435-628-972 Sequence 972, App
	705	11	0.9	17	1	US-08-435-628-2053 Sequence 2053, Ap
	706	11	0.9	17	1	US-08-373-124A-974 Sequence 974, App
	707	11	0.9	17	1	US-08-373-124A-2055 Sequence 2055, Ap
	708	11	0.9	17	1	US-08-435-628-974 Sequence 974, App
	709	11	0.9	17	1	US-08-435-628-2055 Sequence 2055, Ap
c	710	11	0.9	17	1	US-09-306-420C-2 Sequence 2, Appli
c	711	11	0.9	17	1	US-09-306-420C-4 Sequence 4, Appli
c	712	11	0.9	17	1	US-09-468-265-20 Sequence 20, Appl
	713	11	0.9	20	1	US-09-046-894-11 Sequence 11, Appl
c	714	11	0.9	20	1	US-09-496-694B-240 Sequence 240, App
	715	11	0.9	20	1	US-09-021-701-865 Sequence 865, App
c	716	10.8	0.9	15	1	US-08-311-486C-189 Sequence 189, App
c	717	10.8	0.9	15	1	US-08-311-486C-197 Sequence 197, App
c	718	10.8	0.9	15	1	US-08-311-486C-706 Sequence 706, App
c	719	10.8	0.9	15	1	US-08-311-486C-707 Sequence 707, App
c	720	10.8	0.9	15	1	US-08-311-486C-708 Sequence 708, App
c	721	10.8	0.9	15	1	US-08-311-486C-196 Sequence 196, App
c	722	10.8	0.9	15	1	US-08-311-486C-720 Sequence 720, App
	723	10.8	0.9	15	1	US-08-585-684B-893 Sequence 893, App
	724	10.8	0.9	15	1	US-09-038-073-893 Sequence 893, App
c	725	10.8	0.9	15	1	US-08-311-486C-187 Sequence 187, App
c	726	10.8	0.9	15	1	US-08-311-486C-703 Sequence 703, App
c	727	10.8	0.9	15	1	US-08-311-486C-704 Sequence 704, App
	728	10.8	0.9	15	1	US-08-334-847-326 Sequence 326, App
c	729	10.8	0.9	15	1	US-08-311-486C-240 Sequence 240, App
c	730	10.8	0.9	15	1	US-08-832-021-41 Sequence 41, Appl
	731	10.8	0.9	15	1	US-08-585-684B-894 Sequence 894, App
	732	10.8	0.9	15	1	US-09-038-073-894 Sequence 894, App

ALIGNMENTS

```
RESULT 1
US-09-710-200-72/c
; Sequence 72, Application US/09710200
; Patent No. 6379897
; GENERAL INFORMATION:
;  APPLICANT: Nanogen, Inc.
;  APPLICANT:  Weidenhammer, Elaine M.
;  APPLICANT:  Wang, Ling
;  APPLICANT:  Xu, Xiao
;  APPLICANT:  Heller, Michael J.
;  APPLICANT:  Kahl, Brenda F.
;  TITLE OF INVENTION: IMPROVED METHODS FOR GENE EXPRESSION MONITORING ON ELECTRONIC MIC
;  FILE REFERENCE: 256/262 Patrick S. Eagleman
;  CURRENT APPLICATION NUMBER: US/09/710,200
;  CURRENT FILING DATE:  2000-11-09
;  NUMBER OF SEQ ID NOS: 73
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 72
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-710-200-72

  Query Match             1.9%;  Score 24;  DB 1;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.51;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          24 GTGTGGGTCTGTTGTAGGGTTGCC 1


RESULT 2
US-09-975-408-72/c
; Sequence 72, Application US/09975408
; Patent No. 6492122
; GENERAL INFORMATION:
;  APPLICANT: Nanogen, Inc.
;  APPLICANT:  Weidenhammer, Elaine M.
;  APPLICANT:  Xu, Xiao
;  APPLICANT:  Kahl, Brenda F.
;  TITLE OF INVENTION: IMPROVED METHODS FOR GENE EXPRESSION MONITORING ON ELECTRONIC MI
;  FILE REFERENCE: 267/174  Patrick S. Eagleman
;  CURRENT APPLICATION NUMBER: US/09/975,408
;  CURRENT FILING DATE:  2001-10-10
;  PRIOR APPLICATION NUMBER: 09/710,200
;  PRIOR FILING DATE: 2000-11-09
;  NUMBER OF SEQ ID NOS: 73
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 72
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-975-408-72

  Query Match             1.9%;  Score 24;  DB 1;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.51;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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RESULT 3
US-08-246-855A-16/c
; Sequence 16, Application US/08246855A
; Patent No. 5811233
;  GENERAL INFORMATION:
;    APPLICANT:  Bowcock, Anne
;    APPLICANT:  Tomfohrde, James
;    APPLICANT:  Menter, Alan
;    APPLICANT:  Gaynor, Richard
;    TITLE OF INVENTION:  COMPOSITIONS AND USES THEREOF IN THE
;    TITLE OF INVENTION:  DIAGNOSIS OF PSORIASIS
;    NUMBER OF SEQUENCES:  16
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/246,855A
;      FILING DATE:  20-MAY-1994
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hibler, David W.
;      REGISTRATION NUMBER:  41,071
;      REFERENCE/DOCKET NUMBER:  UTSD:402/PAR
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (512) 418-3000
;      TELEFAX:  (512) 474-7577
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  INFORMATION FOR SEQ ID NO:  16:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  21 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
S-08-246-855A-16

 Query Match             1.7%;  Score 21;  DB 1;  Length 21;
 Best Local Similarity   100.0%;  Pred. No. 2.4;
 Matches   21;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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b         21 TCTGTGGTATCCAAGAATCAG 1


ESULT 4
CT-US95-06356-16/c
 Sequence 16, Application PC/TUS9506356
  GENERAL INFORMATION:
    APPLICANT:
    APPLICANT:  NAME:     BOARD OF REGENTS, THE UNIVERSITY OF TEXAS
    APPLICANT:  SYSTEM
    APPLICANT:  STREET:   201 West 7th Street
    APPLICANT:  CITY:     Austin
    APPLICANT:  STATE:    Texas
    APPLICANT:  COUNTRY:  United States of America
    APPLICANT:  POSTAL CODE:  78701
    APPLICANT:  TELEPHONE NO:  (512)499-4462
    APPLICANT:  TELEFAX:  (512)499-4523
    TITLE OF INVENTION:  COMPOSITIONS AND USES THEREOF
    TITLE OF INVENTION:  IN THE DIAGNOSIS OF PSORIASIS
    NUMBER OF SEQUENCES:  16
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  ARNOLD, WHITE & DURKEE
      STREET:  P.O. Box 4433
      CITY:  Houston
      STATE:  Texas
      COUNTRY:  USA
      ZIP:  77210
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  WordPerfect 5.1
    ATTORNEY/AGENT INFORMATION:
      NAME:  Mayfield, Denise L.
      REGISTRATION NUMBER:  33,732
      REFERENCE/DOCKET NUMBER:  UTSD449P--
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  PCT/US95/06356
      FILING DATE:  CONCURRENTLY HEREWITH
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/246,855
      FILING DATE:  20 MAY 1994
      CLASSIFICATION:
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  512/418-3000
      TELEFAX:  512/474-7577
      TELEX:  79-0924
  INFORMATION FOR SEQ ID NO:  16:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  21 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA (genomic)
CT-US95-06356-16

 Query Match             1.7%;  Score 21;  DB 1;  Length 21;
 Best Local Similarity   100.0%;  Pred. No. 2.4;
   Matches   21;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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 Db         21 TCTGTGGTATCCAAGAATCAG 1


 RESULT 5
 US-09-046-894-11/c
 ; Sequence 11, Application US/09046894
 ; Patent No. 6190857
 ;  GENERAL INFORMATION:
 ;    APPLICANT:  Ralph, David
 ;    APPLICANT:  An, Gang
 ;    APPLICANT:  O'Hara, Mark S.
 ;    APPLICANT:  Veltri, Robert
 ;    TITLE OF INVENTION:  DIAGNOSIS OF DISEASE STATE USING mRNA
 ;    TITLE OF INVENTION:  PROFILES IN PERIPHERAL LEUKOCYTES
 ;    NUMBER OF SEQUENCES:  55
 ;    CORRESPONDENCE ADDRESS:
 ;      ADDRESSEE:  Arnold, White & Durkee
 ;      STREET:  P.O. Box 4433
 ;      CITY:  Houston
 ;      STATE:  Texas
 ;      COUNTRY:  USA
 ;      ZIP:  77210
 ;    COMPUTER READABLE FORM:
 ;      MEDIUM TYPE:  Floppy disk
 ;      COMPUTER:  IBM PC compatible
 ;      OPERATING SYSTEM:  PC-DOS/MS-DOS
 ;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
 ;    CURRENT APPLICATION DATA:
 ;      APPLICATION NUMBER:  US/09/046,894
 ;      FILING DATE:  Concurrently Herewith
 ;      CLASSIFICATION:
 ;    PRIOR APPLICATION DATA:
 ;      APPLICATION NUMBER:  US 60/041,576
 ;      FILING DATE:  24-MAR-1997
 ;    ATTORNEY/AGENT INFORMATION:
 ;      NAME:  Nakashima, Richard A.
 ;      REGISTRATION NUMBER:  P-42,023
 ;      REFERENCE/DOCKET NUMBER:  UROC:014
 ;    TELECOMMUNICATION INFORMATION:
 ;      TELEPHONE:  (512) 418-3000
 ;      TELEFAX:  (512) 474-7577
 ;  INFORMATION FOR SEQ ID NO:  11:
 ;    SEQUENCE CHARACTERISTICS:
 ;      LENGTH:  20 base pairs
 ;      TYPE:  nucleic acid
 ;      STRANDEDNESS:  single
 ;      TOPOLOGY:  linear
 US-09-046-894-11

   Query Match             1.6%;  Score 20;  DB 1;  Length 20;
   Best Local Similarity   100.0%;  Pred. No. 3.9;
   Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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 Db         20 GGTCTGTTGTAGGGTTGCCA 1


 RESULT 6
 US-09-165-868-8
 ; Sequence 8, Application US/09165868
 ; Patent No. 6465176
 ; GENERAL INFORMATION:
 ;  APPLICANT: Message Pharmaceuticals, Inc.
 ;  TITLE OF INVENTION: METHOD FOR IDENTIFYING COMPOUNDS
 ;  TITLE OF INVENTION:  AFFECTING RNA/RNA BINDING PROTEIN INTERACTIONS
 ;  FILE REFERENCE: 50093/003WO1
 ;  CURRENT APPLICATION NUMBER: US/09/165,868
 ;  CURRENT FILING DATE:  1998-10-02
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;  PRIOR APPLICATION NUMBER: PCT/US99/21672
;  PRIOR FILING DATE: 1999-09-16
;  NUMBER OF SEQ ID NOS: 11
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 8
;   LENGTH: 21
;   TYPE: RNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic
US-09-165-868-8

  Query Match             1.4%;  Score 17.4;  DB 1;  Length 21;
  Best Local Similarity   26.3%;  Pred. No. 24;
  Matches    5;  Conservative   13;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1044 TTATTTATGTATTTATTTA 1062
              ::|:::|: :|:::|:::|
Db          3 UUAUUUAUUUAUUUAUUUA 21


RESULT 7
US-09-433-694-61/c
; Sequence 61, Application US/09433694
; Patent No. 6165790
; GENERAL INFORMATION:
;  APPLICANT: Alexander H. Borchers
;  APPLICANT: Donna T. Ward
;  APPLICANT: Lex M. Cowsert
;  TITLE OF INVENTION: ANTISENSE MODULATION OF PI3 KINASE P55 GAMMA EXPRESSION
;  FILE REFERENCE: RTS-0098
;  CURRENT APPLICATION NUMBER: US/09/433,694
;  CURRENT FILING DATE: 1999-11-03
;  NUMBER OF SEQ ID NOS: 89
; SEQ ID NO 61
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
US-09-433-694-61

  Query Match             1.3%;  Score 16.4;  DB 1;  Length 20;
  Best Local Similarity   94.4%;  Pred. No. 39;
  Matches   17;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1606 ATGAAACATTTAAAATAT 1623
              |||||||| |||||||||
Db         20 ATGAAACAATTAAAATAT 3


RESULT 8
US-08-619-542B-58/c
; Sequence 58, Application US/08619542B
; Patent No. 5830662
;  GENERAL INFORMATION:
;    APPLICANT:  The Trustees of Columbia University in the City
;    APPLICANT:  of New York
;    TITLE OF INVENTION:  METHOD FOR CONSTRUCTION OF NORMALIZED
;    TITLE OF INVENTION:  cDNA LIBRARIES
;    NUMBER OF SEQUENCES:  78
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Cooper & Dunham LLP
;      STREET:  1185 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10036
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/619,542B
;      FILING DATE:  June 21, 1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  White, John P.
;      REGISTRATION NUMBER:  28,678
;      REFERENCE/DOCKET NUMBER:  42840-A-PCT-US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212) 278-0400
;      TELEFAX:  (212) 391-0525
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  58:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    ANTI-SENSE:  YES
US-08-619-542B-58

  Query Match             1.3%;  Score 16.2;  DB 1;  Length 22;
  Best Local Similarity   85.7%;  Pred. No. 59;
  Matches   18;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1068 CAAATATTTGTGCAAGAATTT 1088
              |||| ||||||| | |||||||
Db         21 CAAAAATTTGTCCCAGAATTT 1


RESULT 9
US-09-422-978-7355
; Sequence 7355, Application US/09422978
; Patent No. 6537751
; GENERAL INFORMATION:
;  APPLICANT: Cohen, Daniel
;  APPLICANT: Blumenfeld, Marta
;  APPLICANT: Chumakov, Ilya
;  TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
;  FILE REFERENCE: GENSET.020CP1
;  CURRENT APPLICATION NUMBER: US/09/422,978
;  CURRENT FILING DATE: 1999-10-20
;  EARLIER APPLICATION NUMBER: US 09/298,850
;  EARLIER FILING DATE: 1999-04-21
;  EARLIER APPLICATION NUMBER: US 60/109,732
;  EARLIER FILING DATE: 1998-11-23
;  EARLIER APPLICATION NUMBER: US 60/082,614
;  EARLIER FILING DATE: 1998-04-21
;  NUMBER OF SEQ ID NOS: 11796
; SEQ ID NO 7355
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Homo Sapiens
;   FEATURE:
;   NAME/KEY: primer_bind
;   LOCATION: 1..20
;   OTHER INFORMATION: upstream amplification primer 99-3893 for SEQ 3421,
US-09-422-978-7355

  Query Match             1.3%;  Score 15.8;  DB 1;  Length 20;
  Best Local Similarity   89.5%;  Pred. No. 57;
  Matches   17;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        901 CTTGGTTTCTCCTTTATTT 919
              || |||||| ||||||||
Db          1 CTGGGTTTCTGCTTTATTT 19


RESULT 10
US-08-123-449A-1/c
; Sequence 1, Application US/08123449A
; Patent No. 5583032
```

```
  GENERAL INFORMATION:
    APPLICANT:  TORRENCE, PAUL
    APPLICANT:  ROBERT, SILVERMAN
    APPLICANT:  RATAN, MAITRA
    APPLICANT:  KRYSTYNA, LESIAK
    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
    TITLE OF INVENTION:  OF RNA
    NUMBER OF SEQUENCES:  22
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Knobbe, Martens, Olson and Bear
      STREET:  620 Newport Center Drive
      CITY:  Newport Beach
      STATE:  CA
      COUNTRY:  USA
      ZIP:  92660
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS version
      SOFTWARE:  FastSeq Version 1.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/123,449A
      FILING DATE:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  PCT/US93/10103
      FILING DATE:  10-OCT-1993
    ATTORNEY/AGENT INFORMATION:
      NAME:  Fedrick, Michael F.
      REGISTRATION NUMBER:  36,799
      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  714-760-0404
      TELEFAX:  714-760-9502
  INFORMATION FOR SEQ ID NO:  1:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  22 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  cDNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
S-08-123-449A-1

 Query Match              1.2%;  Score 15.6;  DB 1;  Length 22;
 Best Local Similarity   81.8%;  Pred. No. 85;
 Matches   18;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Y        616 ACAAAAAACAACAAATAATTTT 637
             | ||||||| || ||| ||||||
D         22 AAAAAAAAAAAAAAAAAAATTTT 1


ESULT 11
3-08-123-449A-2/c
 Sequence 2, Application US/08123449A
 Patent No. 5583032
  GENERAL INFORMATION:
    APPLICANT:  TORRENCE, PAUL
    APPLICANT:  ROBERT, SILVERMAN
    APPLICANT:  RATAN, MAITRA
    APPLICANT:  KRYSTYNA, LESIAK
    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
    TITLE OF INVENTION:  OF RNA
    NUMBER OF SEQUENCES:  22
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Knobbe, Martens, Olson and Bear
      STREET:  620 Newport Center Drive
      CITY:  Newport Beach
      STATE:  CA
      COUNTRY:  USA
      ZIP:  92660
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS version
      SOFTWARE:  FastSeq Version 1.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/123,449A
      FILING DATE:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  PCT/US93/10103
      FILING DATE:  10-OCT-1993
    ATTORNEY/AGENT INFORMATION:
      NAME:  Fedrick, Michael F.
      REGISTRATION NUMBER:  36,799
      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  714-760-0404
      TELEFAX:  714-760-9502
  INFORMATION FOR SEQ ID NO:  2:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  22 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  cDNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
US-08-123-449A-2

  Query Match              1.2%;  Score 15.6;  DB 1;  Length 22;
  Best Local Similarity   81.8%;  Pred. No. 85;
  Matches   18;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy        616 ACAAAAAACAACAAATAATTTT 637
              | ||||||| || ||| ||||||
Db         22 AAAAAAAAAAAAAAAAAAATTTT 1


RESULT 12
US-08-458-050-1/c
; Sequence 1, Application US/08458050
; Patent No. 5677289
;  GENERAL INFORMATION:
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/458,050
;      FILING DATE:  01-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/123,449
;      FILING DATE:  17-SEP-1993
;      APPLICATION NUMBER:  PCT/US93/10103
```

```
;      FILING DATE:  10-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Fedrick, Michael F.
;      REGISTRATION NUMBER:  36,799
;      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  714-760-0404
;      TELEFAX:  714-760-9502
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
IS-08-458-050-1

  Query Match             1.2%;  Score 15.6;  DB 1;  Length 22;
  Best Local Similarity   81.8%;  Pred. No. 85;
  Matches   18;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy        616 ACAAAAAACAACAAATAATTTT 637
              | |||||| || ||| ||||||
Db         22 AAAAAAAAAAAAAAAAAAATTTT 1


RESULT 13
JS-08-458-050-2/c
; Sequence 2, Application US/08458050
; Patent No. 5677289
;  GENERAL INFORMATION:
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/458,050
;      FILING DATE:  01-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/123,449
;      FILING DATE:  17-SEP-1993
;      APPLICATION NUMBER:  PCT/US93/10103
;      FILING DATE:  10-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Fedrick, Michael F.
;      REGISTRATION NUMBER:  36,799
;      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  714-760-0404
;      TELEFAX:  714-760-9502
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
US-08-458-050-2

  Query Match             1.2%;  Score 15.6;  DB 1;  Length 22;
  Best Local Similarity   81.8%;  Pred. No. 85;
  Matches   18;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy        616 ACAAAAAACAACAAATAATTTT 637
              | |||||| || ||| ||||||
Db         22 AAAAAAAAAAAAAAAAAAATTTT 1


RESULT 14
US-08-950-196-1/c
; Sequence 1, Application US/08950196
; Patent No. 6271369
;  GENERAL INFORMATION:
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/950,196
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/123,449
;      FILING DATE:
;      APPLICATION NUMBER:  PCT/US93/10103
;      FILING DATE:  10-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Fedrick, Michael F.
;      REGISTRATION NUMBER:  36,799
;      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  714-760-0404
;      TELEFAX:  714-760-9502
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
US-08-950-196-1

  Query Match             1.2%;  Score 15.6;  DB 1;  Length 22;
  Best Local Similarity   81.8%;  Pred. No. 85;
```

```
 Matches   18;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

y        616 ACAAAAAACAACAAATAATTTT 637
             |||||| || ||| ||||||
b         22 AAAAAAAAAAAAAAAAAATTTT 1


ESULT 15
S-08-950-196-2/c
 Sequence 2, Application US/08950196
 Patent No. 6271369
  GENERAL INFORMATION:
    APPLICANT:  TORRENCE, PAUL
    APPLICANT:  ROBERT, SILVERMAN
    APPLICANT:  RATAN, MAITRA
    APPLICANT:  KRYSTYNA, LESIAK
    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
    TITLE OF INVENTION:  OF RNA
    NUMBER OF SEQUENCES:  22
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Knobbe, Martens, Olson and Bear
      STREET:  620 Newport Center Drive
      CITY:  Newport Beach
      STATE:  CA
      COUNTRY:  USA
      ZIP:  92660
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS version
      SOFTWARE:  FastSeq Version 1.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/950,196
      FILING DATE:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  US/08/123,449
      FILING DATE:
      APPLICATION NUMBER:  PCT/US93/10103
      FILING DATE:  10-OCT-1993
    ATTORNEY/AGENT INFORMATION:
      NAME:  Fedrick, Michael F.
      REGISTRATION NUMBER:  36,799
      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  714-760-0404
      TELEFAX:  714-760-9502
  INFORMATION FOR SEQ ID NO:  2:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  22 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  cDNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
S-08-950-196-2

 Query Match             1.2%;  Score 15.6;  DB 1;  Length 22;
 Best Local Similarity   81.8%;  Pred. No. 85;
 Matches   18;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

y        616 ACAAAAAACAACAAATAATTTT 637
             |||||| || ||| ||||||
b         22 AAAAAAAAAAAAAAAAAATTTT 1


ESULT 16
S-08-146-421-9
 Sequence 9, Application US/08146421
 Patent No. 5543499
  GENERAL INFORMATION:
;    APPLICANT:  BREWER, GARY
;    TITLE OF INVENTION:  DNA SEQUENCE ENCODING A POLYPEPTIDE WITH
;    TITLE OF INVENTION:  ANTI-TUMOR PROPERTIES
;    NUMBER OF SEQUENCES:  9
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  DILWORTH & BARRESE
;      STREET:  4350 LA JOLLA VILLAGE DRIVE, SUITE 300
;      CITY:  SAN DIEGO
;      STATE:  CALIFORNIA
;      COUNTRY:  U.S.A.
;      ZIP:  92122
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/146,421
;      FILING DATE:  29-OCT-1993
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  PEPPER PH.D., FREDERICK W.
;      REGISTRATION NUMBER:  31,286
;      REFERENCE/DOCKET NUMBER:  489-2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-546-4410
;      TELEFAX:  619-453-2839
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  mRNA
US-08-146-421-9

  Query Match             1.2%;  Score 15.4;  DB 1;  Length 17;
  Best Local Similarity   29.4%;  Pred. No. 46;
  Matches    5;  Conservative   11;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1046 ATTTATGTATTTATTTA 1062
              |:::|: :|:::|:::|
Db          1 AUUUAUUUAUUUAUUUA 17


RESULT 17
US-09-205-144-43
; Sequence 43, Application US/09205144
; Patent No. 5958771
; GENERAL INFORMATION:
;  APPLICANT: C. Frank Bennett
;  APPLICANT: Elizabeth J. Ackermann
;  APPLICANT: Lex M. Cowsert
;  TITLE OF INVENTION: ANTISENSE MODULATION OF CELLULAR INHIBITOR OF APOPTOSIS-2 EXPRESS
;  FILE REFERENCE: RTS-0021
;  CURRENT APPLICATION NUMBER: US/09/205,144
;  CURRENT FILING DATE: 1998-12-03
;  NUMBER OF SEQ ID NOS: 47
; SEQ ID NO 43
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
US-09-205-144-43

  Query Match             1.2%;  Score 15.4;  DB 1;  Length 18;
  Best Local Similarity   94.1%;  Pred. No. 54;
  Matches   16;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1294 CTGAAATTTTAATTGAA 1310
              |||||||||| ||||||
Db          1 CTGAAATTTTGATTGAA 17
```

```
RESULT 18
US-09-488-744A-83/c
  Sequence 83, Application US/09488744A
  Patent No. 6287860
  GENERAL INFORMATION:
    APPLICANT:    Brett P. Monia
    APPLICANT:  William Gaarde
    APPLICANT:  Donna T. Ward
    APPLICANT:  Susan M. Freier
    APPLICANT:  Jacqueline Wyatt
    TITLE OF INVENTION:    ANTISENSE MODULATION OF MEKK2 EXPRESSION
    FILE REFERENCE:    RTS-0108
    CURRENT APPLICATION NUMBER: US/09/488,744A
    CURRENT FILING DATE:  2000-01-20
    NUMBER OF SEQ ID NOS:    88
  SEQ ID NO 83
    LENGTH: 20
    TYPE: DNA
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Antisense Oligonucleotide
US-09-488-744A-83

  Query Match             1.2%;  Score 15.4;  DB 1;  Length 20;
  Best Local Similarity   94.1%;  Pred. No. 74;
  Matches   16;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        512 GATTCCTGGTTAAATTT 528
              ||||| ||||||||||
Db         17 GATTCTTGGTTAAATTT 1


RESULT 19
US-08-943-731-521
; Sequence 521, Application US/08943731
; Patent No. 6265157
;  GENERAL INFORMATION:
;    APPLICANT:  PROCKOP, DARWIN J.
;    APPLICANT:  SPOTILA, LORETTA D.
;    APPLICANT:  DELTAS, CONSTANTINOS D.
;    APPLICANT:  SEREDA, LARISA
;    APPLICANT:  LARSON, ANDREA W.
;    APPLICANT:  PACK, MICHAEL
;    APPLICANT:  COLIGE, ALAIN
;    APPLICANT:  EARLY, JAMES
;    APPLICANT:  KORKKO, JARMO
;    APPLICANT:  ALA-KOKKO, LEENA, et al.
;    TITLE OF INVENTION:  COMPOSITIONS AND METHODS FOR DETECTING
;    TITLE OF INVENTION:  ALTERED TYPE I OR TYPE IX COLLAGEN GENE SEQUENCES
;    NUMBER OF SEQUENCES:  666
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  PANITCH SCHWARZE JACOBS & NADEL, P.C.
;      STREET:  ONE COMMERCE SQUARE, 2005 MARKET STREET, 22ND
;      STREET:  FLR.
;      CITY:  PHILADELPHIA
;      STATE:  PA
;      COUNTRY:  USA
;      ZIP:  19103-7086
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/943,731
;      FILING DATE:  03-OCT-1997
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/212,322
;      FILING DATE:  14-MAR-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/803,628
;      FILING DATE:  03-DEC-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  DOYLE LEARY Ph.D., KATHRYN
;      REGISTRATION NUMBER:  36,317
;      REFERENCE/DOCKET NUMBER:  9598-27
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  215-965-1284
;      TELEFAX:  215-567-2991
;      TELEX:  831-494
;  INFORMATION FOR SEQ ID NO:  521:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-943-731-521

  Query Match             1.2%;  Score 15.4;  DB 1;  Length 22;
  Best Local Similarity   94.1%;  Pred. No. 97;
  Matches   16;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        421 CAGTGAAGATGCCAGTG 437
              |||||||||||||||| |
Db          1 CAGTGAAGATGCCAGAG 17


RESULT 20
US-07-922-723A-29/c
; Sequence 29, Application US/07922723A
; Patent No. 5369004
;  GENERAL INFORMATION:
;    APPLICANT:  Drs. Mihael H. Polymeropoulos
;    APPLICANT:  and Carl R. Merril
;    TITLE OF INVENTION:  FIVE HIGHLY INFORMATIVE
;    TITLE OF INVENTION:  REPEAT POLYMORPHIC DNA MARKERS
;    NUMBER OF SEQUENCES:  73
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lowe, Price, LeBlanc & Becker
;      STREET:  Suite 300, 99 Canal Center Plaza
;      CITY:  Alexandria
;      STATE:  Virginia
;      COUNTRY:  USA
;      ZIP:  22314
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  DOS Text File
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/922,723A
;      FILING DATE:
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  D.J. Mills
;      REGISTRATION NUMBER:  34506
;      REFERENCE/DOCKET NUMBER:  717081B
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703 684 1111
;  INFORMATION FOR SEQ ID NO:  29:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-07-922-723A-29

  Query Match             1.2%;  Score 15.2;  DB 1;  Length 20;
  Best Local Similarity   85.0%;  Pred. No. 83;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;
```

```
Qy        427 AGATGCCAGTGAAACTTCAA 446
              | ||||||||||| ||||| |
Db         20 ACATGCCAGTGACACTTCCA 1


RESULT 21
US-07-799-828C-29/c
; Sequence 29, Application US/07799828C
; Patent No. 5378602
;  GENERAL INFORMATION:
;    APPLICANT:  Drs. Carl R. Merril and
;    APPLICANT:  Mihael H. Polymeropoulos
;    TITLE OF INVENTION:  TWENTY SEVEN HIGHLY INFORMATIVE
;    TITLE OF INVENTION:  MICROSATELLITE REPEAT
;    TITLE OF INVENTION:  POLYMORPHIC DNA MARKERS
;    NUMBER OF SEQUENCES:  63
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lowe, Price, LeBlanc & Becker
;      STREET:  Suite 300, 99 Canal Center Plaza
;      CITY:  Alexandria
;      STATE:  Virginia
;      COUNTRY:  USA
;      ZIP:  22314
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  DOS Text File
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/799,828C
;      FILING DATE:  19911127
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  D.J. Mills
;      REGISTRATION NUMBER:  34,506
;      REFERENCE/DOCKET NUMBER:  717081A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703 684 1111
;  INFORMATION FOR SEQ ID NO:  29:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
JS-07-799-828C-29

  Query Match             1.2%;  Score 15.2;  DB 1;  Length 20;
  Best Local Similarity   85.0%;  Pred. No. 83;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

)y        427 AGATGCCAGTGAAACTTCAA 446
              | ||||||||||| ||||| |
)b         20 ACATGCCAGTGACACTTCCA 1


RESULT 22
JS-07-952-277A-29/c
; Sequence 29, Application US/07952277A
; Patent No. 5861504
;  GENERAL INFORMATION:
;    APPLICANT:  Drs. Mihael H. Polymeropoulos
;    APPLICANT:  and Carl R. Merril
;    TITLE OF INVENTION:  ELEVEN HIGHLY INFORMATIVE
;    TITLE OF INVENTION:  REPEAT POLYMORPHIC DNA MARKERS
;    NUMBER OF SEQUENCES:  85
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lowe, Price, LeBlanc & Becker
;      STREET:  Suite 300, 99 Canal Center Plaza
;      CITY:  Alexandria
;      STATE:  Virginia
;      COUNTRY:  USA
;      ZIP:  22314
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  DOS Text File
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/952,277A
;      FILING DATE:
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  D.J. Mills
;      REGISTRATION NUMBER:  34506
;      REFERENCE/DOCKET NUMBER:  717081C
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703 684 1111
;  INFORMATION FOR SEQ ID NO:  29:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-07-952-277A-29

  Query Match             1.2%;  Score 15.2;  DB 1;  Length 20;
  Best Local Similarity   85.0%;  Pred. No. 83;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        427 AGATGCCAGTGAAACTTCAA 446
              | ||||||||||| ||||| |
Db         20 ACATGCCAGTGACACTTCCA 1


RESULT 23
US-09-780-173A-92/c
; Sequence 92, Application US/09780173A
; Patent No. 6455307
; GENERAL INFORMATION:
;  APPLICANT: Robert McKay
;  APPLICANT:  Susan M. Freier
;  APPLICANT:  Jacqueline Wyatt
;  TITLE OF INVENTION: ANTISENSE MODULATION OF CASEIN KINASE 2-ALPHA PRIME EXPRESSION
;  FILE REFERENCE: RTS-0165
;  CURRENT APPLICATION NUMBER: US/09/780,173A
;  CURRENT FILING DATE:  2001-02-08
;  NUMBER OF SEQ ID NOS: 95
; SEQ ID NO 92
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
US-09-780-173A-92

  Query Match             1.2%;  Score 15.2;  DB 1;  Length 20;
  Best Local Similarity   85.0%;  Pred. No. 83;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        633 ATTTTTGAATATAAGGATTT 652
              ||| ||||||| |||| |||
Db         20 ATTATTGAATAAAAGGTTTT 1


RESULT 24
US-08-377-687-53/c
; Sequence 53, Application US/08377687
; Patent No. 5538525
;  GENERAL INFORMATION:
;    APPLICANT:  BROEKAERT, WILLEM F.
;    APPLICANT:  CAMMUE, BRUNO P.A.
;    APPLICANT:  OSBORN, RUPERT W.
;    APPLICANT:  REES, SARAH B.
;    APPLICANT:  TERRAS, FRANKY R.G.
```

```
;    APPLICANT:  VANDERLEYDEN, JOZEF
;    TITLE OF INVENTION:  BIOCIDAL PROTEINS
;    NUMBER OF SEQUENCES:  59
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  CUSHMAN DARBY & CUSHMAN
;      STREET:  1100 NEW YORK AVENUE, N.W.
;      CITY:  WASHINGTON
;      STATE:  D.C.
;      COUNTRY:  USA
;      ZIP:  20005
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/377,687
;      FILING DATE:
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/002,480
;      FILING DATE:  04-JAN-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  KOKULIS, PAUL N.
;      REGISTRATION NUMBER:  16,773
;      REFERENCE/DOCKET NUMBER:  99042/SEE.36525/US/A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-861-3000
;      TELEFAX:  202-822-0944
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  21 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-377-687-53

  Query Match             1.2%;  Score 15.2;  DB 1;  Length 21;
  Best Local Similarity   85.0%;  Pred. No. 96;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        688 AAATTGGGCCAAGGGCCAAG 707
              || ||| ||||| |||||||
Db         20 AAGTTGTGCCAAAGGCCAAG 1


RESULT 25
US-08-777-192-53/c
; Sequence 53, Application US/08777192
; Patent No. 5824869
;  GENERAL INFORMATION:
;    APPLICANT:  BROEKAERT, WILLEM F.
;    APPLICANT:  CAMMUE, BRUNO P.A.
;    APPLICANT:  OSBORN, RUPERT W.
;    APPLICANT:  REES, SARAH B.
;    APPLICANT:  TERRAS, FRANKY R.G.
;    APPLICANT:  VANDERLEYDEN, JOZEF
;    TITLE OF INVENTION:  BIOCIDAL PROTEINS
;    NUMBER OF SEQUENCES:  59
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  CUSHMAN DARBY & CUSHMAN
;      STREET:  1100 NEW YORK AVENUE, N.W.
;      CITY:  WASHINGTON
;      STATE:  D.C.
;      COUNTRY:  USA
;      ZIP:  20005
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/777,192
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/002,480
;      FILING DATE:  04-JAN-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  KOKULIS, PAUL N.
;      REGISTRATION NUMBER:  16,773
;      REFERENCE/DOCKET NUMBER:  99042/SEE.36525/US/A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-861-3000
;      TELEFAX:  202-822-0944
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  21 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-777-192-53

  Query Match             1.2%;  Score 15.2;  DB 1;  Length 21;
  Best Local Similarity   85.0%;  Pred. No. 96;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        688 AAATTGGGCCAAGGGCCAAG 707
              || ||| ||||| |||||||
Db         20 AAGTTGTGCCAAAGGCCAAG 1


RESULT 26
US-08-971-982-53/c
; Sequence 53, Application US/08971982
; Patent No. 6187904
;  GENERAL INFORMATION:
;       APPLICANT: BROEKAERT, WILLEM F.
;                  CAMMUE, BRUNO P.A.
;                  OSBORN, RUPERT W.
;                  REES, SARAH B.
;                  TERRAS, FRANKY R.G.
;                  VANDERLEYDEN, JOZEF
;       TITLE OF INVENTION: BIOCIDAL PROTEINS
;       NUMBER OF SEQUENCES: 59
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: CUSHMAN DARBY & CUSHMAN
;            STREET: 1100 NEW YORK AVENUE, N.W.
;            CITY: WASHINGTON
;            STATE: D.C.
;            COUNTRY: USA
;            ZIP: 20005
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.25
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/08/971,982
;            FILING DATE: 17-No. 6187904-1997
;            CLASSIFICATION: <Unknown>
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: US 08/002,480
;            FILING DATE: 04-JAN-1993
;       ATTORNEY/AGENT INFORMATION:
;            NAME: KOKULIS, PAUL N.
;            REGISTRATION NUMBER: 16,773
;            REFERENCE/DOCKET NUMBER: 99042/SEE.36525/US/A
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: 202-861-3000
;            TELEFAX: 202-822-0944
;  INFORMATION FOR SEQ ID NO: 53:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 21 base pairs
```

```
            TYPE: nucleic acid
            STRANDEDNESS: both
            TOPOLOGY: linear
         MOLECULE TYPE: cDNA
         SEQUENCE DESCRIPTION: SEQ ID NO: 53:
3-08-971-982-53

 Query Match              1.2%;  Score 15.2;  DB 1;  Length 21;
 Best Local Similarity   85.0%;  Pred. No. 96;
 Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

r        688 AAATTGGGCCAAGGGCCAAG 707
             || ||| ||||| |||||||
D         20 AAGTTGTGCCAAAGGCCAAG 1


ESULT 27
3-09-357-073-33
 Sequence 33, Application US/09357073
 Patent No. 6033910
 GENERAL INFORMATION:
  APPLICANT: Brett P. Monia
  APPLICANT: Lex M. Cowsert
  TITLE OF INVENTION: ANTISENSE MODULATION OF MAP KINASE KINASE 6 EXPRESSION
  FILE REFERENCE: RTS-0086
  CURRENT APPLICATION NUMBER: US/09/357,073
  CURRENT FILING DATE: 1999-07-19
  NUMBER OF SEQ ID NOS: 47
 SEQ ID NO 33
    LENGTH: 20
    TYPE: DNA
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Antisense Oligonucleotide
S-09-357-073-33

 Query Match              1.2%;  Score 14.8;  DB 1;  Length 20;
 Best Local Similarity   88.9%;  Pred. No. 1.1e+02;
 Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

y        407 TGGTATCCAAGAATCAGT 424
             | || ||||||||||||||
D          2 TAGTCTCCAAGAATCAGT 19


ESULT 28
S-09-280-805-239/c
 Sequence 239, Application US/09280805
 Patent No. 6184212
  GENERAL INFORMATION:
    APPLICANT:  Loren J. Miraglia, Pamela Nero, Mark J.
    APPLICANT:  Graham, Brett P. Monia
    TITLE OF INVENTION:  ANTISENSE MODULATION OF HUMAN MDM2
    TITLE OF INVENTION:  EXPRESSION
    NUMBER OF SEQUENCES:  271
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Law Offices of Jane Massey Licata
      STREET:  66 East Main Street
      CITY:  Marlton
      STATE:  NJ
      COUNTRY:  U.S.A.
      ZIP:  08053
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
      COMPUTER:  IBM PC
      OPERATING SYSTEM:  WINDOWS 95
      SOFTWARE:  WORDPERFECT 6.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/09/280,805
      FILING DATE:  herewith
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  09/048,810
;       FILING DATE:  March 26, 1998
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Licata, Jane Massey
;       REGISTRATION NUMBER:  32,257
;       REFERENCE/DOCKET NUMBER:  ISPH-0346
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  609-810-1515
;       TELEFAX:  609-810-1454
;   INFORMATION FOR SEQ ID NO:  239:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  20 base pairs
;       TYPE:  Nucleic Acid
;       STRANDEDNESS:  Single
;       TOPOLOGY:  Linear
;     ANTI-SENSE:  Yes
US-09-280-805-239

  Query Match              1.2%;  Score 14.8;  DB 1;  Length 20;
  Best Local Similarity   88.9%;  Pred. No. 1.1e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1017 TTCAAGTGTAACTTATTA 1034
              || || ||||||||||||||
Db         18 TTTAAATGTAACTTATTA 1


RESULT 29
US-09-496-694B-239
; Sequence 239, Application US/09496694B
; Patent No. 6335194
; GENERAL INFORMATION:
;  APPLICANT: C. Frank Bennett
;  APPLICANT:  Elizabeth J. Ackermann
;  APPLICANT:  Eric E. Swayze
;  APPLICANT:  Lex M. Cowsert
;  TITLE OF INVENTION: ANTISENSE MODULATION OF SURVIVIN EXPRESSION
;  FILE REFERENCE: ISPH-0439
;  CURRENT APPLICATION NUMBER: US/09/496,694B
;  CURRENT FILING DATE:  2000-02-02
;  PRIOR APPLICATION NUMBER: 09/286,407
;  PRIOR FILING DATE: 1999-04-05
;  PRIOR APPLICATION NUMBER: 09/163,162
;  PRIOR FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 249
; SEQ ID NO 239
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
US-09-496-694B-239

  Query Match              1.2%;  Score 14.8;  DB 1;  Length 20;
  Best Local Similarity   88.9%;  Pred. No. 1.1e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1039 ATTTATTATTTATGTATT 1056
              | |||||||||| ||||||
Db          2 AGTTATTATTTTTGTATT 19


RESULT 30
US-09-496-694B-240
; Sequence 240, Application US/09496694B
; Patent No. 6335194
; GENERAL INFORMATION:
;  APPLICANT: C. Frank Bennett
;  APPLICANT:  Elizabeth J. Ackermann
;  APPLICANT:  Eric E. Swayze
;  APPLICANT:  Lex M. Cowsert
;  TITLE OF INVENTION: ANTISENSE MODULATION OF SURVIVIN EXPRESSION
;  FILE REFERENCE: ISPH-0439
;  CURRENT APPLICATION NUMBER: US/09/496,694B
```

```
;  CURRENT FILING DATE:  2000-02-02
;  PRIOR APPLICATION NUMBER: 09/286,407
;  PRIOR FILING DATE: 1999-04-05
;  PRIOR APPLICATION NUMBER: 09/163,162
;  PRIOR FILING DATE: 1998-09-29
   NUMBER OF SEQ ID NOS: 249
  SEQ ID NO 240
    LENGTH: 20
    TYPE: DNA
    ORGANISM: Artificial Sequence
    FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
JS-09-496-694B-240

  Query Match             1.2%;  Score 14.8;  DB 1;  Length 20;
  Best Local Similarity   88.9%;  Pred. No. 1.1e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1039 ATTTATTATTTATGTATT 1056
              | ||||||||| ||||||
Db          3 AGTTATTATTTTTGTATT 20


RESULT 31
US-09-658-687A-26/c
; Sequence 26, Application US/09658687A
; Patent No. 6387699
; GENERAL INFORMATION:
;  APPLICANT: C. Frank Bennett
;  APPLICANT:  Jacqueline Wyatt
;  TITLE OF INVENTION: ANTISENSE MODULATION OF A20 EXPRESSION
;  FILE REFERENCE: RTS-0141
;  CURRENT APPLICATION NUMBER: US/09/658,687A
;  CURRENT FILING DATE:  2000-09-08
;  NUMBER OF SEQ ID NOS: 88
; SEQ ID NO 26
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
US-09-658-687A-26

  Query Match             1.2%;  Score 14.8;  DB 1;  Length 20;
  Best Local Similarity   88.9%;  Pred. No. 1.1e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1237 ATTTTCATTTCAGATAAA 1254
              ||| |||||||||| |||
Db         18 ATTGTCATTTCAGACAAA 1


RESULT 32
US-08-261-825-7/c
; Sequence 7, Application US/08261825
; Patent No. 5558993
;  GENERAL INFORMATION:
;    APPLICANT:  Champion, Cheryl I.
;    APPLICANT:  Lovett, Michael A.
;    APPLICANT:  Haake, David A.
;    APPLICANT:  Miller, James N.
;    APPLICANT:  Blanco, David R.
;    TITLE OF INVENTION:  CLONED Borrelia burgdorferi VIRULENCE
;    TITLE OF INVENTION:  PROTEIN
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Spensley Horn Jubas & Lubitz
;      STREET:  1880 Century Park East, Suite 500
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  90067
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/261,825
;      FILING DATE:  17-JUN-1994
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  TUMARKIN, LISA A.
;      REGISTRATION NUMBER:  P-38,347
;      REFERENCE/DOCKET NUMBER:  PD3516
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 455-5100
;      TELEFAX:  (619) 455-5110
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  21 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    IMMEDIATE SOURCE:
;      CLONE:  OspA-1
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..21
US-08-261-825-7

  Query Match             1.2%;  Score 14.8;  DB 1;  Length 21;
  Best Local Similarity   88.9%;  Pred. No. 1.2e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        542 CAATGAATAGTTTTTCAT 559
              |||| |||| ||||||||
Db         18 CAATAAATATTTTTTCAT 1


RESULT 33
US-08-719-124-7/c
; Sequence 7, Application US/08719124
; Patent No. 5854395
;  GENERAL INFORMATION:
;    APPLICANT:  Champion, Cheryl I.
;    APPLICANT:  Lovett, Michael A.
;    APPLICANT:  Haake, David A.
;    APPLICANT:  Miller, James N.
;    APPLICANT:  Blanco, David R.
;    TITLE OF INVENTION:  CLONED Borrelia burgdorferi VIRULENCE
;    TITLE OF INVENTION:  PROTEIN
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Spensley Horn Jubas & Lubitz
;      STREET:  1880 Century Park East, Suite 500
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  90067
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/719,124
;      FILING DATE:  24-SEP-1996
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/261,825
;      FILING DATE:  17-JUN-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  TUMARKIN, LISA A.
;      REGISTRATION NUMBER:  P-38,347
```

```
      REFERENCE/DOCKET NUMBER:  PD3516
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (619) 455-5100
      TELEFAX:  (619) 455-5110
  INFORMATION FOR SEQ ID NO:  7:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  21 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA (genomic)
    IMMEDIATE SOURCE:
      CLONE:  OspA-1
    FEATURE:
      NAME/KEY:  CDS
      LOCATION:  1..21
3-08-719-124-7

 Query Match             1.2%;  Score 14.8;  DB 1;  Length 21;
 Best Local Similarity   88.9%;  Pred. No. 1.2e+02;
 Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

/        542 CAATGAATAGTTTTTCAT 559
             |||| |||| ||||||||
>         18 CAATAAATATTTTTTCAT 1


ESULT 34
3-09-461-697-307
 Sequence 307, Application US/09461697
 Patent No. 6277974
 GENERAL INFORMATION:
  APPLICANT: COGENT NEUROSCIENCE, Inc.
  APPLICANT: Lo, Donald C.
  APPLICANT: Barney, Shawn
  APPLICANT: Thomas, Mary Beth
  APPLICANT: Portbury, Stuart D.
  APPLICANT: Puranam, Kasturi
  APPLICANT: Katz, Lawrence C.
  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSING
  TITLE OF INVENTION: AND TREATING CONDITIONS, DISORDERS, OR DISEASES INVOLVING
  TITLE OF INVENTION: CELL DEATH
  FILE REFERENCE: 10001-005-999
  CURRENT APPLICATION NUMBER: US/09/461,697
  CURRENT FILING DATE: 1999-12-14
  NUMBER OF SEQ ID NOS: 466
  SOFTWARE: FastSEQ for Windows Version 4.0
 SEQ ID NO 307
    LENGTH: 21
    TYPE: DNA
    ORGANISM: Homo sapiens
3-09-461-697-307

 Query Match             1.2%;  Score 14.8;  DB 1;  Length 21;
 Best Local Similarity   88.9%;  Pred. No. 1.2e+02;
 Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

/        830 GGATTTTTTTCTGTTAAA 847
             |||||||||||||||  ||
>          4 GGATTTTTTTCTGTGTAA 21


ESULT 35
3-09-422-978-10751/c
 Sequence 10751, Application US/09422978
 Patent No. 6537751
 GENERAL INFORMATION:
  APPLICANT: Cohen, Daniel
  APPLICANT: Blumenfeld, Marta
  APPLICANT: Chumakov, Ilya
  TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
  FILE REFERENCE: GENSET.020CP1
  CURRENT APPLICATION NUMBER: US/09/422,978
  CURRENT FILING DATE: 1999-10-20
  EARLIER APPLICATION NUMBER: US 09/298,850
  EARLIER FILING DATE: 1999-04-21
  EARLIER APPLICATION NUMBER: US 60/109,732
  EARLIER FILING DATE: 1998-11-23
  EARLIER APPLICATION NUMBER: US 60/082,614
  EARLIER FILING DATE: 1998-04-21
  NUMBER OF SEQ ID NOS: 11796
 SEQ ID NO 10751
    LENGTH: 21
    TYPE: DNA
    ORGANISM: Homo Sapiens
    FEATURE:
    NAME/KEY: primer_bind
    LOCATION: 1..21
    OTHER INFORMATION: downstream amplification primer 99-19601 for SEQ 2886, in complen
US-09-422-978-10751

  Query Match             1.2%;  Score 14.8;  DB 1;  Length 21;
  Best Local Similarity   88.9%;  Pred. No. 1.2e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1593 TATAAAAGTAAATATGAA 1610
              |||||||| ||| |||||
Db         20 TATAAAAGGAAAGATGAA 3


RESULT 36
PCT-US95-07748-7/c
 Sequence 7, Application PC/TUS9507748
  GENERAL INFORMATION:
    APPLICANT:  The Regents of the University of California
    TITLE OF INVENTION:  CLONED Borrelia burgdorferi VIRULENCE
    TITLE OF INVENTION:  PROTEIN
    NUMBER OF SEQUENCES:  8
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Fish & Richardson P.C.
      STREET:  4225 Executive Square, Suite 1400
      CITY:  La Jolla
      STATE:  California
      COUNTRY:  USA
      ZIP:  92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  PCT/US95/07748
      FILING DATE:  16-JUN-1995
      CLASSIFICATION:
    ATTORNEY/AGENT INFORMATION:
      NAME:  HAILE, LISA A.
      REGISTRATION NUMBER:  38,347
      REFERENCE/DOCKET NUMBER:  07419/013WO1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (619) 678-5070
      TELEFAX:  (619) 678-5099
  INFORMATION FOR SEQ ID NO:  7:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  21 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA (genomic)
    IMMEDIATE SOURCE:
      CLONE:  OspA-1
    FEATURE:
      NAME/KEY:  CDS
      LOCATION:  1..21
PCT-US95-07748-7

  Query Match             1.2%;  Score 14.8;  DB 1;  Length 21;
```

```
  Best Local Similarity   88.9%;  Pred. No. 1.2e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        542 CAATGAATAGTTTTTCAT 559
              |||| |||| ||||||||
Db         18 CAATAAATATTTTTTCAT 1


RESULT 37
PCT-US95-07748A-7/c
; Sequence 7, Application PC/TUS9507748A
;  GENERAL INFORMATION:
;    APPLICANT:  The Regents of the University of California
;    TITLE OF INVENTION:  CLONED Borrelia burgdorferi VIRULENCE
;    TITLE OF INVENTION:  PROTEIN
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson P.C.
;      STREET:  4225 Executive Square, Suite 1400
;      CITY:  La Jolla
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/07748A
;      FILING DATE:  16-JUN-1995
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  HAILE, Ph.D., LISA A.
;      REGISTRATION NUMBER:  38,347
;      REFERENCE/DOCKET NUMBER:  07419/013WO1 (PD3516)
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 678-5070
;      TELEFAX:  (619) 678-5099
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  21 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    IMMEDIATE SOURCE:
;      CLONE:  OspA-1
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..21
PCT-US95-07748A-7

  Query Match             1.2%;  Score 14.8;  DB 1;  Length 21;
  Best Local Similarity   88.9%;  Pred. No. 1.2e+02;
  Matches   16;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        542 CAATGAATAGTTTTTCAT 559
              |||| |||| ||||||||
Db         18 CAATAAATATTTTTTCAT 1


RESULT 38
US-09-371-772B-4900
; Sequence 4900, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 4900
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
US-09-371-772B-4900

  Query Match             1.2%;  Score 14.4;  DB 1;  Length 17;
  Best Local Similarity   68.8%;  Pred. No. 86;
  Matches   11;  Conservative    4;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        441 CTTCAAGCAAATCTAC 456
              |::|||||||: :||
Db          1 CUUCAAGCAAAUGUAC 16


RESULT 39
US-09-626-929-23
; Sequence 23, Application US/09626929
; Patent No. 6319714
; GENERAL INFORMATION:
;  APPLICANT: CRAMERI, ANDREAS
;  APPLICANT:  STEMMER, WILLEM P.C.
;  APPLICANT:  MINSHULL, JEREMY
;  APPLICANT:  BASS, STEVEN H.
;  APPLICANT:  WELCH, MARK
;  APPLICANT:  NESS, JON E.
;  APPLICANT:  GUSTAFSSON, CLAES
;  APPLICANT:  PATTEN, PHILLIP A.
;  TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED NUCLEIC ACID RECOMBINATION
;  FILE REFERENCE: 02-029620US
;  CURRENT APPLICATION NUMBER: US/09/626,929
;    2000-07-27
;  CURRENT FILING DATE:  2000-07-27
;  PRIOR APPLICATION NUMBER: 09/408,392
;  PRIOR FILING DATE: 1999-09-28
;  PRIOR APPLICATION NUMBER: 60/118,813
;  PRIOR FILING DATE: 1999-02-05
;  PRIOR APPLICATION NUMBER: 60/141,049
;  PRIOR FILING DATE: 1999-06-24
;  NUMBER OF SEQ ID NOS: 26
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 23
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Primer
US-09-626-929-23

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 19;
  Best Local Similarity   84.2%;  Pred. No. 1.3e+02;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1102 ATGAATCATTGATTGAATA 1120
              |||||| ||  ||||||||
Db          1 ATGAATAATGTATTGAATA 19


RESULT 40
US-09-484-850-23
; Sequence 23, Application US/09484850
; Patent No. 6368861
; GENERAL INFORMATION:
```

APPLICANT: CRAMERI, ANDREAS
APPLICANT: STEMMER, WILLEM P.C.
APPLICANT: MINSHULL, JEREMY
APPLICANT: BASS, STEVEN H.
APPLICANT: WELCH, MARK
APPLICANT: NESS, JON E.
APPLICANT: GUSTAFSSON, CLAES
APPLICANT: PATTEN, PHILLIP A.
TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED NUCLEIC ACID RECOMBINATION
FILE REFERENCE: 02-029630US
CURRENT APPLICATION NUMBER: US/09/484,850
CURRENT FILING DATE: 2000-01-18
PRIOR APPLICATION NUMBER: 09/408,392
PRIOR FILING DATE: 1999-09-28
PRIOR APPLICATION NUMBER: 60/118,813
PRIOR FILING DATE: 1999-02-05
PRIOR APPLICATION NUMBER: 60/141,049
PRIOR FILING DATE: 1999-06-24
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 23
LENGTH: 19
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Primer
-09-484-850-23

Query Match 1.1%; Score 14.2; DB 1; Length 19;
Best Local Similarity 84.2%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

1102 ATGAATCATTGATTGAATA 1120
|||||| || ||||||||
1 ATGAATAATGTATTGAATA 19

SULT 41
-09-408-392-23
Sequence 23, Application US/09408392
Patent No. 6376246
GENERAL INFORMATION:
APPLICANT: CRAMERI, ANDREAS
APPLICANT: STEMMER, WILLEM P.C.
APPLICANT: MINSHULL, JEREMY
APPLICANT: BASS, STEVEN H.
APPLICANT: WELCH, MARK
APPLICANT: NESS, JON E.
APPLICANT: GUSTAFSSON, CLAES
APPLICANT: PATTEN, PHILLIP A.
TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED NUCLEIC ACID RECOMBINATION
FILE REFERENCE: 02-029620US
CURRENT APPLICATION NUMBER: US/09/408,392
CURRENT FILING DATE: 1999-09-28
PRIOR APPLICATION NUMBER: 60/118,813
PRIOR FILING DATE: 1999-02-05
PRIOR APPLICATION NUMBER: 60/141,049
PRIOR FILING DATE: 1999-06-24
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 23
LENGTH: 19
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Primer
-09-408-392-23

Query Match 1.1%; Score 14.2; DB 1; Length 19;
Best Local Similarity 84.2%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

1102 ATGAATCATTGATTGAATA 1120
|||||| || ||||||||
Db 1 ATGAATAATGTATTGAATA 19

RESULT 42
US-09-626-930-23
; Sequence 23, Application US/09626930
; Patent No. 6423542
; GENERAL INFORMATION:
; APPLICANT: CRAMERI, ANDREAS
; APPLICANT: STEMMER, WILLEM P.C.
; APPLICANT: MINSHULL, JEREMY
; APPLICANT: BASS, STEVEN H.
; APPLICANT: WELCH, MARK
; APPLICANT: NESS, JON E.
; APPLICANT: GUSTAFSSON, CLAES
; APPLICANT: PATTEN, PHILLIP A.
; TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED NUCLEIC ACID RECOMBINATION
; FILE REFERENCE: 02-029620US
; CURRENT APPLICATION NUMBER: US/09/626,930
; CURRENT FILING DATE: 2000-07-27
; PRIOR APPLICATION NUMBER: 09/408,392
; PRIOR FILING DATE: 1999-09-28
; PRIOR APPLICATION NUMBER: 60/118,813
; PRIOR FILING DATE: 1999-02-05
; PRIOR APPLICATION NUMBER: 60/141,049
; PRIOR FILING DATE: 1999-06-24
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 23
; LENGTH: 19
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Primer
US-09-626-930-23

Query Match 1.1%; Score 14.2; DB 1; Length 19;
Best Local Similarity 84.2%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1102 ATGAATCATTGATTGAATA 1120
|||||| || ||||||||
Db 1 ATGAATAATGTATTGAATA 19

RESULT 43
US-09-626-528-23
; Sequence 23, Application US/09626528
; Patent No. 6426224
; GENERAL INFORMATION:
; APPLICANT: CRAMERI, ANDREAS
; APPLICANT: STEMMER, WILLEM P.C.
; APPLICANT: MINSHULL, JEREMY
; APPLICANT: BASS, STEVEN H.
; APPLICANT: WELCH, MARK
; APPLICANT: NESS, JON E.
; APPLICANT: GUSTAFSSON, CLAES
; APPLICANT: PATTEN, PHILLIP A.
; TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED NUCLEIC ACID RECOMBINATION
; FILE REFERENCE: 02-029620US
; CURRENT APPLICATION NUMBER: US/09/626,528
; CURRENT FILING DATE: 2000-07-27
; PRIOR APPLICATION NUMBER: 09/408,392
; PRIOR FILING DATE: 1999-09-28
; PRIOR APPLICATION NUMBER: 60/118,813
; PRIOR FILING DATE: 1999-02-05
; PRIOR APPLICATION NUMBER: 60/141,049
; PRIOR FILING DATE: 1999-06-24
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 23
; LENGTH: 19

```
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Primer
JS-09-626-528-23

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 19;
  Best Local Similarity   84.2%;  Pred. No. 1.3e+02;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1102 ATGAATCATTGATTGAATA 1120
              |||||| ||  ||||||||
Db          1 ATGAATAATGTATTGAATA 19


RESULT 44
JS-09-626-595-23
  Sequence 23, Application US/09626595
  Patent No. 6479652
  GENERAL INFORMATION:
   APPLICANT: CRAMERI, ANDREAS
   APPLICANT:  STEMMER, WILLEM P.C.
   APPLICANT:  MINSHULL, JEREMY
   APPLICANT:  BASS, STEVEN H.
   APPLICANT:  WELCH, MARK
   APPLICANT:  NESS, JON E.
   APPLICANT:  GUSTAFSSON, CLAES
   APPLICANT:  PATTEN, PHILLIP A.
   TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED NUCLEIC ACID RECOMBINATION
   FILE REFERENCE: 02-029620US
   CURRENT APPLICATION NUMBER: US/09/626,595
   CURRENT FILING DATE:  2000-07-27
   PRIOR APPLICATION NUMBER: 09/408,392
   PRIOR FILING DATE: 1999-09-28
   PRIOR APPLICATION NUMBER: 60/118,813
   PRIOR FILING DATE: 1999-02-05
   PRIOR APPLICATION NUMBER: 60/141,049
   PRIOR FILING DATE: 1999-06-24
   NUMBER OF SEQ ID NOS: 26
   SOFTWARE: PatentIn Ver. 2.1
  SEQ ID NO 23
    LENGTH: 19
    TYPE: DNA
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Description of Artificial Sequence: Primer
JS-09-626-595-23

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 19;
  Best Local Similarity   84.2%;  Pred. No. 1.3e+02;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1102 ATGAATCATTGATTGAATA 1120
              |||||| ||  ||||||||
Db          1 ATGAATAATGTATTGAATA 19


RESULT 45
JS-09-694-863-23
; Sequence 23, Application US/09694863
; Patent No. 6521453
; GENERAL INFORMATION:
;  APPLICANT: CRAMERI, ANDREAS
;  APPLICANT:  STEMMER, WILLEM P.C.
;  APPLICANT:  MINSHULL, JEREMY
;  APPLICANT:  BASS, STEVEN H.
;  APPLICANT:  WELCH, MARK
;  APPLICANT:  NESS, JON E.
;  APPLICANT:  GUSTAFSSON, CLAES
;  APPLICANT:  PATTEN, PHILLIP A.
;  TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED NUCLEIC ACID RECOMBINATION
;  FILE REFERENCE: 02-029620US
;  CURRENT APPLICATION NUMBER: US/09/694,863
;  CURRENT FILING DATE:  2000-10-23
;  PRIOR APPLICATION NUMBER: 09/408,392
;  PRIOR FILING DATE: 1999-09-28
;  PRIOR APPLICATION NUMBER: 60/141,049
;  PRIOR FILING DATE: 1999-06-24
;  NUMBER OF SEQ ID NOS: 26
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 23
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Primer
US-09-694-863-23

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 19;
  Best Local Similarity   84.2%;  Pred. No. 1.3e+02;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1102 ATGAATCATTGATTGAATA 1120
              |||||| ||  ||||||||
Db          1 ATGAATAATGTATTGAATA 19


RESULT 46
US-08-807-104-2
; Sequence 2, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
;      REFERENCE/DOCKET NUMBER:  19406DA
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  732-594-4678
;      TELEFAX:  732-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  2...2
```

```
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  2...2
      OTHER INFORMATION:
S-08-807-104-2

 Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
 Best Local Similarity   21.1%;  Pred. No. 1.5e+02;
 Matches    4;  Conservative   12;  Mismatches    3;  Indels    0;  Gaps    0;

/       1519 GCTTTATATTTTTAACTTT 1537
             | ::: :|:::::|| :::
>          1 GGUUUUUAUUUUUAAUUUU 19


ESULT 47
S-09-116-780-8
 Sequence 8, Application US/09116780
 Patent No. 5945335
 GENERAL INFORMATION:
  APPLICANT: Colosi, Peter
  TITLE OF INVENTION: Adenovirus Helper-Free Systems for Producing
  TITLE OF INVENTION: Recombinant AAV Virions Lacking Oncogenic Sequences
  FILE REFERENCE: 2555.2.2
  CURRENT APPLICATION NUMBER: US/09/116,780
  CURRENT FILING DATE: 1998-07-16
  EARLIER APPLICATION NUMBER: 08/745,957
  EARLIER FILING DATE: 1996-11-07
  EARLIER APPLICATION NUMBER: 60/006,402
  EARLIER FILING DATE: 1995-11-09
  NUMBER OF SEQ ID NOS: 11
  SOFTWARE: PatentIn Ver. 2.0
 SEQ ID NO 8
   LENGTH: 20
   TYPE: DNA
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence:oligonucleotide
S-09-116-780-8

 Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
 Best Local Similarity   84.2%;  Pred. No. 1.5e+02;
 Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

y        975 TGTGGAAGCACTTTAAGTT 993
             |||||||||  || || |||
b          2 TGTGGAAGCGCTGTATGTT 20


ESULT 48
S-08-480-068-2
 Sequence 2, Application US/08480068
 Patent No. 6111095
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  US
      ZIP:  07065-0907
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  FastSEQ Version 1.5
    CURRENT APPLICATION DATA:
;     APPLICATION NUMBER:  US/08/480,068
;     FILING DATE:  07-JUN-1995
;     CLASSIFICATION:  514
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:
;     FILING DATE:
;   ATTORNEY/AGENT INFORMATION:
;     NAME:  GIESSER, JOANNE M
;     REGISTRATION NUMBER:  32,838
;     REFERENCE/DOCKET NUMBER:  19406
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE:  908-594-3046
;     TELEFAX:  908-594-4720
;     TELEX:
; INFORMATION FOR SEQ ID NO:  2:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH:  20 base pairs
;     TYPE:  nucleic acid
;     STRANDEDNESS:  single
;     TOPOLOGY:  linear
;   MOLECULE TYPE:  Genomic RNA
;   HYPOTHETICAL:  NO
;   ANTI-SENSE:  NO
;   FRAGMENT TYPE:
;   ORIGINAL SOURCE:
;   FEATURE:
;     NAME/KEY:  Modified Base
;     LOCATION:  2...2
;     OTHER INFORMATION:
;     NAME/KEY:  Modified Base
;     LOCATION:  2...2
;     OTHER INFORMATION:
US-08-480-068-2

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
  Best Local Similarity   21.1%;  Pred. No. 1.5e+02;
  Matches    4;  Conservative   12;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1519 GCTTTATATTTTTAACTTT 1537
              | ::: :|:::::|| :::
Db          1 GGUUUUUAUUUUUAAUUUU 19


RESULT 49
US-09-446-504-53
; Sequence 53, Application US/09446504
; Patent No. 6218150
; GENERAL INFORMATION:
;  APPLICANT:  UEMORI, Takashi
;  APPLICANT:  SATO, Yoshimi
;  APPLICANT:  FUJITA, Tomoko
;  APPLICANT:  MIYAKE, Kazue
;  APPLICANT:  MUKAI, Hiroyuki
;  APPLICANT:  ASADA, Kiyozo
;  APPLICANT:  KATO, Ikunoshin
;  TITLE OF INVENTION:  DNA POLYMERASE-RELATED FACTORS
;  FILE REFERENCE:  1422-408PCT
;  CURRENT APPLICATION NUMBER: US/09/446,504
;  CURRENT FILING DATE:  1999-12-23
;  PRIOR APPLICATION NUMBER:  PCT/JP98/02845
;  PRIOR FILING DATE:  1998-06-24
;  PRIOR APPLICATION NUMBER:  JP 9-187496
;  PRIOR FILING DATE:  1997-06-26
;  PRIOR APPLICATION NUMBER:  JP 9-320692
;  PRIOR FILING DATE:  1997-11-27
;  NUMBER OF SEQ ID NOS:  92
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 53
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
```

```
US-09-446-504-53

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
  Best Local Similarity   84.2%;  Pred. No. 1.5e+02;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        583 TACTTATATGTAAAGTATT 601
              | ||  ||||||||||||||
Db          1 TTCTGCTATGTAAAGTATT 19


RESULT 50
US-09-446-504-54/c
; Sequence 54, Application US/09446504
; Patent No. 6218150
; GENERAL INFORMATION:
;  APPLICANT:  UEMORI, Takashi
;  APPLICANT:  SATO, Yoshimi
;  APPLICANT:  FUJITA, Tomoko
;  APPLICANT:  MIYAKE, Kazue
;  APPLICANT:  MUKAI, Hiroyuki
;  APPLICANT:  ASADA, Kiyozo
;  APPLICANT:  KATO, Ikunoshin
;  TITLE OF INVENTION:  DNA POLYMERASE-RELATED FACTORS
;  FILE REFERENCE:  1422-408PCT
;  CURRENT APPLICATION NUMBER: US/09/446,504
;  CURRENT FILING DATE:  1999-12-23
;  PRIOR APPLICATION NUMBER:  PCT/JP98/02845
;  PRIOR FILING DATE:  1998-06-24
;  PRIOR APPLICATION NUMBER:  JP 9-187496
;  PRIOR FILING DATE:  1997-06-26
;  PRIOR APPLICATION NUMBER:  JP 9-320692
;  PRIOR FILING DATE:  1997-11-27
;  NUMBER OF SEQ ID NOS:  92
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 54
;    LENGTH: 20
;    TYPE: DNA
;    ORGANISM: Artificial Sequence
;    FEATURE:
;    OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-09-446-504-54

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
  Best Local Similarity   84.2%;  Pred. No. 1.5e+02;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        583 TACTTATATGTAAAGTATT 601
              | ||  ||||||||||||||
Db         20 TTCTGCTATGTAAAGTATT 2


RESULT 51
US-09-021-701-864/c
; Sequence 864, Application US/09021701
; Patent No. 6251588
;  GENERAL INFORMATION:
;    APPLICANT:  Shannon, Karen W.
;    APPLICANT:  Wolber, Paul K.
;    APPLICANT:  Delenstarr, Glenda C.
;    APPLICANT:  Webb, Peter G.
;    APPLICANT:  Kincaid, Robert H.
;    TITLE OF INVENTION:  Methods for evaluating oligonucleotide
;    TITLE OF INVENTION:  probe sequences
;    NUMBER OF SEQUENCES:  1165
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Records Manager, Legal Department, Hewlett-Packard Company M/S 20
;      STREET:  3000 Hanover Street
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/021,701
;      FILING DATE:  10-FEB-1998
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Choi, Wendy A.
;      REGISTRATION NUMBER:  36,697
;      REFERENCE/DOCKET NUMBER:  10971464-1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650-236-2386
;      TELEFAX:  650-852-8063
;  INFORMATION FOR SEQ ID NO:  864:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
US-09-021-701-864

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
  Best Local Similarity   84.2%;  Pred. No. 1.5e+02;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        982 GCACTTTAAGTTTTTTCAT 1000
              |||||||||  ||||  |||
Db         20 GCACTTTAAATTTTCCCAT 2


RESULT 52
US-09-021-701-865/c
; Sequence 865, Application US/09021701
; Patent No. 6251588
;  GENERAL INFORMATION:
;    APPLICANT:  Shannon, Karen W.
;    APPLICANT:  Wolber, Paul K.
;    APPLICANT:  Delenstarr, Glenda C.
;    APPLICANT:  Webb, Peter G.
;    APPLICANT:  Kincaid, Robert H.
;    TITLE OF INVENTION:  Methods for evaluating oligonucleotide
;    TITLE OF INVENTION:  probe sequences
;    NUMBER OF SEQUENCES:  1165
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Records Manager, Legal Department, Hewlett-Packard Company M/S 20
;      STREET:  3000 Hanover Street
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/021,701
;      FILING DATE:  10-FEB-1998
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Choi, Wendy A.
;      REGISTRATION NUMBER:  36,697
;      REFERENCE/DOCKET NUMBER:  10971464-1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650-236-2386
;      TELEFAX:  650-852-8063
;  INFORMATION FOR SEQ ID NO:  865:
;    SEQUENCE CHARACTERISTICS:
```

```
      LENGTH:  20 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  cDNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
S-09-021-701-865

 Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
 Best Local Similarity   84.2%;  Pred. No. 1.5e+02;
 Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        982 GCACTTTAAGTTTTTTCAT 1000
              ||||||||| ||||  |||
Db         19 GCACTTTAAATTTTCCCAT 1


ESULT 53
S-09-021-701-869/c
 Sequence 869, Application US/09021701
 Patent No. 6251588
  GENERAL INFORMATION:
    APPLICANT:  Shannon, Karen W.
    APPLICANT:  Wolber, Paul K.
    APPLICANT:  Delenstarr, Glenda C.
    APPLICANT:  Webb, Peter G.
    APPLICANT:  Kincaid, Robert H.
    TITLE OF INVENTION:  Methods for evaluating oligonucleotide
    TITLE OF INVENTION:  probe sequences
    NUMBER OF SEQUENCES:  1165
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Records Manager, Legal Department, Hewlett-Packard Company M/S 20
      STREET:  3000 Hanover Street
      CITY:  Palo Alto
      STATE:  CA
      COUNTRY:  USA
      ZIP:  94304
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/09/021,701
      FILING DATE:  10-FEB-1998
      CLASSIFICATION:
    ATTORNEY/AGENT INFORMATION:
      NAME:  Choi, Wendy A.
      REGISTRATION NUMBER:  36,697
      REFERENCE/DOCKET NUMBER:  10971464-1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  650-236-2386
      TELEFAX:  650-852-8063
  INFORMATION FOR SEQ ID NO:  869:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  20 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  cDNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
S-09-021-701-869

 Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
 Best Local Similarity   84.2%;  Pred. No. 1.5e+02;
 Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

y         977 TGGAAGCACTTTAAGTTTT 995
              |||  |||||||||| ||||
b          20 TGGTTGCACTTTAAATTTT 2


RESULT 54
US-09-021-701-870/c
; Sequence 870, Application US/09021701
; Patent No. 6251588
;  GENERAL INFORMATION:
;    APPLICANT:  Shannon, Karen W.
;    APPLICANT:  Wolber, Paul K.
;    APPLICANT:  Delenstarr, Glenda C.
;    APPLICANT:  Webb, Peter G.
;    APPLICANT:  Kincaid, Robert H.
;    TITLE OF INVENTION:  Methods for evaluating oligonucleotide
;    TITLE OF INVENTION:  probe sequences
;    NUMBER OF SEQUENCES:  1165
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Records Manager, Legal Department, Hewlett-Packard Company M/S 20
;      STREET:  3000 Hanover Street
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/021,701
;      FILING DATE:  10-FEB-1998
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Choi, Wendy A.
;      REGISTRATION NUMBER:  36,697
;      REFERENCE/DOCKET NUMBER:  10971464-1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650-236-2386
;      TELEFAX:  650-852-8063
;  INFORMATION FOR SEQ ID NO:  870:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  20 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
US-09-021-701-870

  Query Match             1.1%;  Score 14.2;  DB 1;  Length 20;
  Best Local Similarity   84.2%;  Pred. No. 1.5e+02;
  Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        977 TGGAAGCACTTTAAGTTTT 995
              |||  |||||||||| ||||
Db         19 TGGTTGCACTTTAAATTTT 1


RESULT 55
US-09-712-266-53
; Sequence 53, Application US/09712266
; Patent No. 6333158
; GENERAL INFORMATION:
;  APPLICANT: UEMORI, Takashi
;  APPLICANT:  SATO, Yoshimi
;  APPLICANT:  FUJITA, Tomoko
;  APPLICANT:  MIYAKE, Kazue
;  APPLICANT:  MUKAI, Hiroyuki
;  APPLICANT:  ASADA, Kiyozo
;  APPLICANT:  KATO, Ikunoshin
;  TITLE OF INVENTION: DNA POLYMERASE-RELATED FACTORS
;  FILE REFERENCE: 1422-408PCT
;  CURRENT APPLICATION NUMBER: US/09/712,266
;  CURRENT FILING DATE:  2000-11-15
```

; PRIOR APPLICATION NUMBER: US 09/446,504
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: PCT/JP98/02845
; PRIOR FILING DATE: 1998-06-24
; PRIOR APPLICATION NUMBER: JP 9-187496
; PRIOR FILING DATE: 1997-06-26
; PRIOR APPLICATION NUMBER: JP 9-320692
; PRIOR FILING DATE: 1997-11-27
; NUMBER OF SEQ ID NOS: 92
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 53
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-09-712-266-53

  Query Match 1.1%; Score 14.2; DB 1; Length 20;
  Best Local Similarity 84.2%; Pred. No. 1.5e+02;
  Matches 16; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 583 TACTTATATGTAAAGTATT 601
        | || ||||||||||||||
Db   1 TTCTGCTATGTAAAGTATT 19

RESULT 56
US-09-712-266-54/c
; Sequence 54, Application US/09712266
; Patent No. 6333158
; GENERAL INFORMATION:
; APPLICANT: UEMORI, Takashi
; APPLICANT: SATO, Yoshimi
; APPLICANT: FUJITA, Tomoko
; APPLICANT: MIYAKE, Kazue
; APPLICANT: MUKAI, Hiroyuki
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: DNA POLYMERASE-RELATED FACTORS
; FILE REFERENCE: 1422-408PCT
; CURRENT APPLICATION NUMBER: US/09/712,266
; CURRENT FILING DATE: 2000-11-15
; PRIOR APPLICATION NUMBER: US 09/446,504
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: PCT/JP98/02845
; PRIOR FILING DATE: 1998-06-24
; PRIOR APPLICATION NUMBER: JP 9-187496
; PRIOR FILING DATE: 1997-06-26
; PRIOR APPLICATION NUMBER: JP 9-320692
; PRIOR FILING DATE: 1997-11-27
; NUMBER OF SEQ ID NOS: 92
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 54
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
US-09-712-266-54

  Query Match 1.1%; Score 14.2; DB 1; Length 20;
  Best Local Similarity 84.2%; Pred. No. 1.5e+02;
  Matches 16; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 583 TACTTATATGTAAAGTATT 601
        | || ||||||||||||||
Db   20 TTCTGCTATGTAAAGTATT 2

RESULT 57
US-08-973-137-2
; Sequence 2, Application US/08973137
; Patent No. 6369208
; GENERAL INFORMATION:
;   APPLICANT: BENSELER, FRITZ
;   APPLICANT: COLE, JAMES L.
;   APPLICANT: OLSEN, DAVID B.
;   APPLICANT: KUO, LAWRENCE C.
;   TITLE OF INVENTION: CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;   NUMBER OF SEQUENCES: 21
;   CORRESPONDENCE ADDRESS:
;   ADDRESSEE: JOANNE M. GIESSER - MERCK & CO., INC.
;   STREET: 126 EAST LINCOLN AVENUE - P.O. BOX 2000
;   CITY: RAHWAY
;   STATE: NJ
;   COUNTRY: US
;   ZIP: 07065-0907
;   COMPUTER READABLE FORM:
;   MEDIUM TYPE: Diskette
;   COMPUTER: IBM Compatible
;   OPERATING SYSTEM: DOS
;   SOFTWARE: FastSEQ Version 1.5
;   CURRENT APPLICATION DATA:
;   APPLICATION NUMBER: US/08/973,137
;   FILING DATE:
;   CLASSIFICATION:
;   PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: 08/480,068
;   FILING DATE: 07-JUN-1995
;   ATTORNEY/AGENT INFORMATION:
;   NAME: GIESSER, JOANNE M
;   REGISTRATION NUMBER: 32,838
;   REFERENCE/DOCKET NUMBER: 19406
;   TELECOMMUNICATION INFORMATION:
;   TELEPHONE: 908-594-3046
;   TELEFAX: 908-594-4720
;   TELEX:
; INFORMATION FOR SEQ ID NO: 2:
;   SEQUENCE CHARACTERISTICS:
;   LENGTH: 20 base pairs
;   TYPE: nucleic acid
;   STRANDEDNESS: single
;   TOPOLOGY: linear
;   MOLECULE TYPE: Genomic RNA
;   HYPOTHETICAL: NO
;   ANTI-SENSE: NO
;   FRAGMENT TYPE:
;   ORIGINAL SOURCE:
;   FEATURE:
;   NAME/KEY: Modified Base
;   LOCATION: 2...2
;   OTHER INFORMATION:
;   NAME/KEY: Modified Base
;   LOCATION: 2...2
;   OTHER INFORMATION:
US-08-973-137-2

  Query Match 1.1%; Score 14.2; DB 1; Length 20;
  Best Local Similarity 21.1%; Pred. No. 1.5e+02;
  Matches 4; Conservative 12; Mismatches 3; Indels 0; Gaps 0;

Qy 1519 GCTTTATATTTTTAACTTT 1537
         | ::: :|:::::|| :::
Db   1 GGUUUUUAUUUUUAAUUUU 19

RESULT 58
US-09-705-299-21
; Sequence 21, Application US/09705299
; Patent No. 6440737
; GENERAL INFORMATION:
; APPLICANT: Lex M. Cowsert
; APPLICANT: Susan M. Freier
; TITLE OF INVENTION: ANTISENSE MODULATION OF CELLULAR APOPTOSIS SUSCEPTIBILITY GENE
; FILE REFERENCE: RTS-0174

```
 CURRENT APPLICATION NUMBER: US/09/705,299
 CURRENT FILING DATE:  2000-11-01
 NUMBER OF SEQ ID NOS:  86
SEQ ID NO 21
  LENGTH: 20
  TYPE: DNA
  ORGANISM: Artificial Sequence
  FEATURE:
  OTHER INFORMATION: Antisense Oligonucleotide
09-705-299-21

Query Match              1.1%;  Score 14.2;  DB 1;  Length 20;
Best Local Similarity   84.2%;  Pred. No. 1.5e+02;
Matches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

      1307 TGAACTAACAATCCTAGTT 1325
           |||| |||  |||||||||
         1 TGAAATAAACATCCTAGTT 19


ULT 59
09-668-313A-84/c
equence 84, Application US/09668313A
atent No. 6503756
ENERAL INFORMATION:
APPLICANT: Brett P. Monia
APPLICANT:  Susan M. Freier
APPLICANT:  Jacqueline Wyatt
TITLE OF INVENTION: ANTISENSE MODULATION OF SYNTAXIN 4 INTERACTING PROTEIN EXPRESSION
FILE REFERENCE: RTS-0127
CURRENT APPLICATION NUMBER: US/09/668,313A
CURRENT FILING DATE:  2000-09-22
NUMBER OF SEQ ID NOS: 247
EQ ID NO 84
 LENGTH: 20
 TYPE: DNA
 ORGANISM: Artificial Sequence
 FEATURE:
 OTHER INFORMATION: Antisense Oligonucleotide
09-668-313A-84

uery Match              1.1%;  Score 14.2;  DB 1;  Length 20;
est Local Similarity   84.2%;  Pred. No. 1.5e+02;
atches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

      1045 TATTTATGTATTTATTTAA 1063
           ||||| |||||  ||||||
        19 TATTTCTGTATACATTTAA 1


ULT 60
09-198-452A-5710/c
equence 5710, Application US/09198452A
atent No. 6559294
ENERAL INFORMATION:
APPLICANT: Griffais, R.
TITLE OF INVENTION: Chlamydia pneumoniae genomic sequence and polypeptides, fragments
TITLE OF INVENTION:  thereof and uses thereof, in particular for the diagnosis, preve
TITLE OF INVENTION:  and treatment of infection
FILE REFERENCE: 9710-003-999
CURRENT APPLICATION NUMBER: US/09/198,452A
CURRENT FILING DATE:  1998-11-24
NUMBER OF SEQ ID NOS: 6849
EQ ID NO 5710
 LENGTH: 20
 TYPE: DNA
 ORGANISM: Chlamydia pneumoniae
09-198-452A-5710

uery Match              1.1%;  Score 14.2;  DB 1;  Length 20;
est Local Similarity   84.2%;  Pred. No. 1.5e+02;
atches   16;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy         968 GAGGACATGTGGAAGCACT 986
               ||||| || ||||||| ||
Db          19 GAGGATATTTGGAAGCCCT 1


RESULT 61
US-08-311-486C-189
; Sequence 189, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  189:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-189

  Query Match              1.1%;  Score 14;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 77;
  Matches    4;  Conservative   10;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1038 TATTTATTATTTAT 1051
              :|:::|::|:::|:
Db          1 UAUUUAUUAUUUAU 14


RESULT 62
US-08-311-486C-197
; Sequence 197, Application US/08311486C
```

```
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  197:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
S-08-311-486C-197

 Query Match             1.1%;  Score 14;  DB 1;  Length 15;
 Best Local Similarity   28.6%;  Pred. No. 77;
 Matches    4;  Conservative   10;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1038 TATTTATTATTTAT 1051
              :|:::|::|:::|:
Db          1 UAUUUAUUAUUUAU 14


ESULT 63
S-08-311-486C-706
 Sequence 706, Application US/08311486C
 Patent No. 5811300
  GENERAL INFORMATION:
    APPLICANT:  Sean Sullivan
    APPLICANT:  Kenneth Draper
    APPLICANT:  Kevin Kisich
    APPLICANT:  Dan T. Stinchcomb
    APPLICANT:  James McSwiggen
    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  706:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-706

  Query Match             1.1%;  Score 14;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 77;
  Matches    4;  Conservative   10;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1038 TATTTATTATTTAT 1051
              :|:::|::|:::|:
Db          1 UAUUUAUUAUUUAU 14


RESULT 64
US-08-311-486C-707
; Sequence 707, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
```

```
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  707:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
S-08-311-486C-707

 Query Match              1.1%;  Score 14;  DB 1;  Length 15;
 Best Local Similarity   28.6%;  Pred. No. 77;
 Matches    4;  Conservative   10;  Mismatches    0;  Indels    0;  Gaps    0;

y       1038 TATTTATTATTTAT 1051
             :|:::|::|:::|:
o          1 UAUUUAUUAUUUAU 14


ESULT 65
S-08-311-486C-708
 Sequence 708, Application US/08311486C
 Patent No. 5811300
  GENERAL INFORMATION:
    APPLICANT:  Sean Sullivan
    APPLICANT:  Kenneth Draper
    APPLICANT:  Kevin Kisich
    APPLICANT:  Dan T. Stinchcomb
    APPLICANT:  James McSwiggen
    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
    TITLE OF INVENTION:  DISEASES OR CONDITIONS
    TITLE OF INVENTION:  RELATED TO LEVELS OF
    TITLE OF INVENTION:  TNF-'
    NUMBER OF SEQUENCES:  1157
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  IBM P.C. DOS 5.0
;       SOFTWARE:  Word Perfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/311,486C
;       FILING DATE:  September 23, 1994
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;     PRIOR APPLICATION DATA:  including application
;     PRIOR APPLICATION DATA:  described below:                    two
;       APPLICATION NUMBER:  08/008,895
;       FILING DATE:  January 19, 1993
;       APPLICATION NUMBER:  07/989,849
;       FILING DATE:  December 7, 1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard J.
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  209/166
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;   INFORMATION FOR SEQ ID NO:  708:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  15 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-311-486C-708

  Query Match              1.1%;  Score 14;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 77;
  Matches    4;  Conservative   10;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1038 TATTTATTATTTAT 1051
              :|:::|::|:::|:
Db          1 UAUUUAUUAUUUAU 14


RESULT 66
US-08-985-162-714
; Sequence 714, Application US/08985162
; Patent No. 6057156
;  GENERAL INFORMATION:
;    APPLICANT:  Akhtar, Saghir
;    APPLICANT:  Fell, Patricia
;    APPLICANT:  McSwiggen, James
;    TITLE OF INVENTION:  ENZYMATIC NUCLEIC ACID TREATMENT
;    TITLE OF INVENTION:  OF DISEASES OR CONDITIONS RELATED
;    TITLE OF INVENTION:  TO LEVELS OF EPIDERMAL GROWTH
;    TITLE OF INVENTION:  FACTOR RECEPTORS
;    NUMBER OF SEQUENCES:  1877
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  FastSEQ for Windows 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/985,162
;      FILING DATE:  04 December 1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/036,476
;      FILING DATE:  31 January 1997
;    ATTORNEY/AGENT INFORMATION:
```

; NAME: Warburg, Richard J.
; REGISTRATION NUMBER: 32,327
; REFERENCE/DOCKET NUMBER: 230/107
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
; INFORMATION FOR SEQ ID NO: 714:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 17 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-985-162-714

Query Match 1.1%; Score 14; DB 1; Length 17;
Best Local Similarity 78.6%; Pred. No. 1.1e+02;
Matches 11; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Qy 1599 AGTAAATATGAAAC 1612
||:|||:|:|||||
Db 2 AGUAAAUAUGAAAC 15

RESULT 67
US-08-117-952-529/c
; Sequence 529, Application US/08117952
; Patent No. 5851760
; GENERAL INFORMATION:
; APPLICANT: Evans, Glen A.
; APPLICANT: Smith, Michael W.
; TITLE OF INVENTION: METHOD FOR GENERATION OF SEQUENCE
; TITLE OF INVENTION: SAMPLED MAPS OF COMPLEX GENOMES
; NUMBER OF SEQUENCES: 797
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Pretty, Schroeder, Brueggemann & Clark
; STREET: 444 South Flower Street, Suite 2000
; CITY: Los Angeles
; STATE: CA
; COUNTRY: USA
; ZIP: 90071
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/117,952
; FILING DATE: 07-SEP-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/078,471
; FILING DATE: 15-JUN-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Reiter, Stephen E.
; REGISTRATION NUMBER: 31,192
; REFERENCE/DOCKET NUMBER: P41 9423
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619-546-4737
; TELEFAX: 619-546-9392
; INFORMATION FOR SEQ ID NO: 529:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 20 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: Oligonucleotide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
US-08-117-952-529

Query Match 1.1%; Score 14; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.7e+02;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 889 GTTCCACTGTGCCT 902
||||||||||||||
Db 17 GTTCCACTGTGCCT 4

RESULT 68
US-09-357-073-42
; Sequence 42, Application US/09357073
; Patent No. 6033910
; GENERAL INFORMATION:
; APPLICANT: Brett P. Monia
; APPLICANT: Lex M. Cowsert
; TITLE OF INVENTION: ANTISENSE MODULATION OF MAP KINASE KINASE 6 EXPRESSION
; FILE REFERENCE: RTS-0086
; CURRENT APPLICATION NUMBER: US/09/357,073
; CURRENT FILING DATE: 1999-07-19
; NUMBER OF SEQ ID NOS: 47
; SEQ ID NO 42
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Antisense Oligonucleotide
US-09-357-073-42

Query Match 1.1%; Score 14; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.7e+02;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1207 AAACAAACAAACAA 1220
||||||||||||||
Db 7 AAACAAACAAACAA 20

RESULT 69
US-09-198-452A-5776
; Sequence 5776, Application US/09198452A
; Patent No. 6559294
; GENERAL INFORMATION:
; APPLICANT: Griffais, R.
; TITLE OF INVENTION: Chlamydia pneumoniae genomic sequence and polypeptides, fragment
; TITLE OF INVENTION: thereof and uses thereof, in particular for the diagnosis, prev
; TITLE OF INVENTION: and treatment of infection
; FILE REFERENCE: 9710-003-999
; CURRENT APPLICATION NUMBER: US/09/198,452A
; CURRENT FILING DATE: 1998-11-24
; NUMBER OF SEQ ID NOS: 6849
; SEQ ID NO 5776
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Chlamydia pneumoniae
US-09-198-452A-5776

Query Match 1.1%; Score 14; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.7e+02;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 644 TAAGGATTTTCCTA 657
||||||||||||||
Db 7 TAAGGATTTTCCTA 20

RESULT 70
US-08-373-124A-972/c
; Sequence 972, Application US/08373124A
; Patent No. 5646042
; GENERAL INFORMATION:
; APPLICANT: Stinchcomb, Dan T.
; APPLICANT: Draper, Kenneth
; APPLICANT: McSwiggen, James
; APPLICANT: Jarvis, Thale

```
    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
    TITLE OF INVENTION:  CANCER USING RIBOZYMES
    NUMBER OF SEQUENCES:  2627
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/373,124A
      FILING DATE:  January 13, 1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
      APPLICATION NUMBER:  08/192,943
      FILING DATE:  February 7, 1994
      APPLICATION NUMBER:  07/987,132
      FILING DATE:  December 7, 1992
      APPLICATION NUMBER:  07/936,422
      FILING DATE:  August 26, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/035
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  972:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
S-08-373-124A-972

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 17;
 Best Local Similarity   88.2%;  Pred. No. 1.3e+02;
 Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

y       1615 TTAAAATATAATTTGTT 1631
             | ||||||||||||| ||
o         17 TAAAAATATAATTTTTT 1


ESULT 71
3-08-373-124A-2053/c
 Sequence 2053, Application US/08373124A
 Patent No. 5646042
  GENERAL INFORMATION:
    APPLICANT:  Stinchcomb, Dan T.
    APPLICANT:  Draper, Kenneth
    APPLICANT:  McSwiggen, James
    APPLICANT:  Jarvis, Thale
    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
    TITLE OF INVENTION:  CANCER USING RIBOZYMES
    NUMBER OF SEQUENCES:  2627
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/373,124A
      FILING DATE:  January 13, 1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
      APPLICATION NUMBER:  08/192,943
      FILING DATE:  February 7, 1994
      APPLICATION NUMBER:  07/987,132
      FILING DATE:  December 7, 1992
      APPLICATION NUMBER:  07/936,422
      FILING DATE:  August 26, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/035
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  2053:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
US-08-373-124A-2053

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 17;
  Best Local Similarity   88.2%;  Pred. No. 1.3e+02;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1615 TTAAAATATAATTTGTT 1631
              | ||||||||||||| ||
Db         17 TAAAAATATAATTTTTT 1


RESULT 72
US-08-435-628-972/c
; Sequence 972, Application US/08435628
; Patent No. 5817796
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
;    NUMBER OF SEQUENCES:  2627
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
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    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/435,628
      FILING DATE:  05-MAY-1995
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/373,124
      FILING DATE:  January 13, 1995
      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
      APPLICATION NUMBER:  08/192,943
      FILING DATE:  February 7, 1994
      APPLICATION NUMBER:  07/987,132
      FILING DATE:  December 7, 1992
      APPLICATION NUMBER:  07/936,422
      FILING DATE:  August 26, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/035
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  972:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
JS-08-435-628-972

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 17;
  Best Local Similarity   88.2%;  Pred. No. 1.3e+02;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1615 TTAAAATATAATTTGTT 1631
              | ||||||||||||| ||
Db         17 TAAAAATATAATTTTTT 1


RESULT 73
US-08-435-628-2053/c
; Sequence 2053, Application US/08435628
; Patent No. 5817796
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
;    NUMBER OF SEQUENCES:  2627
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,628
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/373,124
;      FILING DATE:  January 13, 1995
;      APPLICATION NUMBER:  08/245,466
;      FILING DATE:  May 18, 1994
;      APPLICATION NUMBER:  08/192,943
;      FILING DATE:  February 7, 1994
;      APPLICATION NUMBER:  07/987,132
;      FILING DATE:  December 7, 1992
;      APPLICATION NUMBER:  07/936,422
;      FILING DATE:  August 26, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/035
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  2053:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-435-628-2053

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 17;
  Best Local Similarity   88.2%;  Pred. No. 1.3e+02;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1615 TTAAAATATAATTTGTT 1631
              | ||||||||||||| ||
Db         17 TAAAAATATAATTTTTT 1


RESULT 74
US-09-468-265-23
; Sequence 23, Application US/09468265
; Patent No. 6379928
; GENERAL INFORMATION:
;  APPLICANT: Berka, Randy M
;  APPLICANT:  Cullen, Daniel
;  APPLICANT:  Gray, Gregory L
;  APPLICANT:  Hayenga, Kirk J
;  APPLICANT:  Lawlis, Virgil B
;  TITLE OF INVENTION: Heterologous Polypeptides Expressed in Filamentous Fungi, Proces
;  TITLE OF INVENTION:  Making Same and Vectors for Making Same
;  FILE REFERENCE: A-42909-5
;  CURRENT APPLICATION NUMBER: US/09/468,265
;  CURRENT FILING DATE:  1999-12-10
;  PRIOR APPLICATION NUMBER: 08/484,384
;  PRIOR FILING DATE: 1995-06-07
;  PRIOR APPLICATION NUMBER: 08/284,942
;  PRIOR FILING DATE: 1994-08-02
;  PRIOR APPLICATION NUMBER: 07/413,010
;  PRIOR FILING DATE: 1989-09-25
;  PRIOR APPLICATION NUMBER: 07/163,219
;  PRIOR FILING DATE: 1988-02-26
;  PRIOR APPLICATION NUMBER: 06/882,224
;  PRIOR FILING DATE: 1986-07-07
;  PRIOR APPLICATION NUMBER: 06/771,374
;  PRIOR FILING DATE: 1985-08-29
;  NUMBER OF SEQ ID NOS: 28
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
;   LENGTH: 17
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide probes
US-09-468-265-23

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 17;
  Best Local Similarity   80.0%;  Pred. No. 1.3e+02;
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 Matches   12;  Conservative    3;  Mismatches    0;  Indels    0;  Gaps    0;

y       1271 AGTATAAGTACATTA 1285
             |:||:||:|||||||
b          2 ARTAYAARTACATTA 16


ESULT 75
S-09-371-772B-5585
 Sequence 5585, Application US/09371772B
 Patent No. 6566127
 GENERAL INFORMATION:
  APPLICANT: Ribozyme Pharmaceuticals, Inc.
  APPLICANT:  Pavco, Pam
  APPLICANT:  McSwiggen, Jim
  APPLICANT:  Stinchcomb, Dan
  APPLICANT:  Escobedo, Jaime
  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
  FILE REFERENCE: MBHB00,876-J (237/198)
  CURRENT APPLICATION NUMBER: US/09/371,772B
  CURRENT FILING DATE:  1999-08-10
  PRIOR APPLICATION NUMBER: US 60/005,974
  PRIOR FILING DATE: 1995-10-26
  PRIOR APPLICATION NUMBER: US 08/584,040
  PRIOR FILING DATE: 1996-01-08
  NUMBER OF SEQ ID NOS: 14225
  SOFTWARE: PatentIn version 3.0
 SEQ ID NO 5585
   LENGTH: 17
   TYPE: RNA
   ORGANISM: Homo sapiens
S-09-371-772B-5585

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 17;
 Best Local Similarity   58.8%;  Pred. No. 1.3e+02;
 Matches   10;  Conservative    5;  Mismatches    2;  Indels    0;  Gaps    0;

y        803 ATAAAGTCAAATTTAGC 819
             |:||| :||||:::| |
b          1 AUAAACUCAAAUUUAUC 17


ESULT 76
S-09-422-978-9394
 Sequence 9394, Application US/09422978
 Patent No. 6537751
 GENERAL INFORMATION:
  APPLICANT: Cohen, Daniel
  APPLICANT: Blumenfeld, Marta
  APPLICANT: Chumakov, Ilya
  TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
  FILE REFERENCE: GENSET.020CP1
  CURRENT APPLICATION NUMBER: US/09/422,978
  CURRENT FILING DATE: 1999-10-20
  EARLIER APPLICATION NUMBER: US 09/298,850
  EARLIER FILING DATE: 1999-04-21
  EARLIER APPLICATION NUMBER: US 60/109,732
  EARLIER FILING DATE: 1998-11-23
  EARLIER APPLICATION NUMBER: US 60/082,614
  EARLIER FILING DATE: 1998-04-21
  NUMBER OF SEQ ID NOS: 11796
 SEQ ID NO 9394
   LENGTH: 18
   TYPE: DNA
   ORGANISM: Homo Sapiens
   FEATURE:
   NAME/KEY: primer_bind
   LOCATION: 1..18
   OTHER INFORMATION: downstream amplification primer 99-370 for SEQ 1529, in complemen
S-09-422-978-9394

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 1.5e+02;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         895 CTGTGCCTTGGTTTCTC 911
               |||||||||| |||||
Db           2 CTGTGCCTTGTCTTCTC 18


RESULT 77
US-09-422-978-9399
; Sequence 9399, Application US/09422978
; Patent No. 6537751
; GENERAL INFORMATION:
;  APPLICANT: Cohen, Daniel
;  APPLICANT: Blumenfeld, Marta
;  APPLICANT: Chumakov, Ilya
;  TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
;  FILE REFERENCE: GENSET.020CP1
;  CURRENT APPLICATION NUMBER: US/09/422,978
;  CURRENT FILING DATE: 1999-10-20
;  EARLIER APPLICATION NUMBER: US 09/298,850
;  EARLIER FILING DATE: 1999-04-21
;  EARLIER APPLICATION NUMBER: US 60/109,732
;  EARLIER FILING DATE: 1998-11-23
;  EARLIER APPLICATION NUMBER: US 60/082,614
;  EARLIER FILING DATE: 1998-04-21
;  NUMBER OF SEQ ID NOS: 11796
; SEQ ID NO 9399
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Homo Sapiens
;   FEATURE:
;   NAME/KEY: primer_bind
;   LOCATION: 1..18
;   OTHER INFORMATION: downstream amplification primer 99-397 for SEQ 1534, in complemen
US-09-422-978-9399

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 1.5e+02;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         895 CTGTGCCTTGGTTTCTC 911
               |||||||||| |||||
Db           2 CTGTGCCTTGTCTTCTC 18


RESULT 78
US-08-487-759-1
; Sequence 1, Application US/08487759
; Patent No. 5660989
;  GENERAL INFORMATION:
;    APPLICANT:  Cole, James L.
;    APPLICANT:  Olsen, David B.
;    APPLICANT:  Kuo, Lawrence C.
;    TITLE OF INVENTION:  DNA POLYMERASE EXTENSION ASSAY FOR
;    TITLE OF INVENTION:  INFLUENZA VIRUS ENDONUCLEASE
;    NUMBER OF SEQUENCES:  5
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Ms. Joanne J. Giesser
;      STREET:  126 E. Lincoln Avenue, P.O. Box 2000-0907
;      CITY:  Rahway
;      STATE:  New Jersey
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/487,759
;      FILING DATE:
;      CLASSIFICATION:  435
```

```
    ATTORNEY/AGENT INFORMATION:
      NAME:  Giesser, Joanne M.
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19393
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (908)-594-3046
      TELEFAX:  (908)-594-4720
  INFORMATION FOR SEQ ID NO:  1:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
S-08-487-759-1

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


ESULT 79
S-08-807-104-1
; Sequence 1, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
;      REFERENCE/DOCKET NUMBER:  19406DA
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  732-594-4678
;      TELEFAX:  732-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
US-08-807-104-1

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 80
US-08-807-104-4
; Sequence 4, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
;      REFERENCE/DOCKET NUMBER:  19406DA
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  732-594-4678
;      TELEFAX:  732-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
US-08-807-104-4

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
```

```
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

y       1521 TTTATATTTTTAACTTT 1537
             ::: :|:::::|| :::
>          2 UUUUUAUUUUUAAUUUU 18


ESULT 81
3-08-807-104-6
 Sequence 6, Application US/08807104
 Patent No. 5861501
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
    TITLE OF INVENTION:  APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  USA
      ZIP:  07065
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  FastSEQ for Windows Version 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/807,104
      FILING DATE:  04-FEB-1997
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/480,068
      FILING DATE:  07-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME:  YABLONSKY, MICHAEL D
      REGISTRATION NUMBER:  40,407
      REFERENCE/DOCKET NUMBER:  19406DA
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  732-594-4678
      TELEFAX:  732-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  6:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  13...13
      OTHER INFORMATION:
3-08-807-104-6

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

       1521 TTTATATTTTTAACTTT 1537
            ::: :|:::::|| :::
>          2 UUUUUAUUUUUAAUUUU 18


RESULT 82
US-08-807-104-7
; Sequence 7, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
;      REFERENCE/DOCKET NUMBER:  19406DA
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  732-594-4678
;      TELEFAX:  732-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  13...13
;      OTHER INFORMATION:
US-08-807-104-7

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
             ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 83
US-08-807-104-8
; Sequence 8, Application US/08807104
; Patent No. 5861501
```

```
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
;      REFERENCE/DOCKET NUMBER:  19406DA
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  732-594-4678
;      TELEFAX:  732-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  6...6
;      OTHER INFORMATION:
JS-08-807-104-8

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative    12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 84
JS-08-807-104-9
; Sequence 9, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
;      REFERENCE/DOCKET NUMBER:  19406DA
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  732-594-4678
;      TELEFAX:  732-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  6...6
;      OTHER INFORMATION:
US-08-807-104-9

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative    12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 85
US-08-807-104-10
; Sequence 10, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
```

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      STATE:  NJ
      COUNTRY:  USA
      ZIP:  07065
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  FastSEQ for Windows Version 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/807,104
      FILING DATE:  04-FEB-1997
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/480,068
      FILING DATE:  07-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME:  YABLONSKY, MICHAEL D
      REGISTRATION NUMBER:  40,407
      REFERENCE/DOCKET NUMBER:  19406DA
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  732-594-4678
      TELEFAX:  732-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  10:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  19...19
      OTHER INFORMATION:
S-08-807-104-10

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

y       1521 TTTATATTTTTAACTTT 1537
             ::: :|:::::|| :::
o          2 UUUUUAUUUUUAAUUUU 18


ESULT 86
3-08-807-104-13
 Sequence 13, Application US/08807104
 Patent No. 5861501
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
    TITLE OF INVENTION:  APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  USA
      ZIP:  07065
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  DOS
;       SOFTWARE:  FastSEQ for Windows Version 2.0
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/807,104
;       FILING DATE:  04-FEB-1997
;       CLASSIFICATION:  514
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/480,068
;       FILING DATE:  07-JUN-1995
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  YABLONSKY, MICHAEL D
;       REGISTRATION NUMBER:  40,407
;       REFERENCE/DOCKET NUMBER:  19406DA
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  732-594-4678
;       TELEFAX:  732-594-4720
;       TELEX:
;   INFORMATION FOR SEQ ID NO:  13:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  19 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  Genomic RNA
;     FEATURE:
;       NAME/KEY:  Modified Base
;       LOCATION:  1...1
;       OTHER INFORMATION:
US-08-807-104-13

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 87
US-08-807-104-14
; Sequence 14, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
```

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;       REFERENCE/DOCKET NUMBER:  19406DA
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  732-594-4678
;       TELEFAX:  732-594-4720
;       TELEX:
;   INFORMATION FOR SEQ ID NO:  14:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  19 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  Genomic RNA
;     FEATURE:
;       NAME/KEY:  Modified Base
;       LOCATION:  1...1
;       OTHER INFORMATION:
;       NAME/KEY:  Modified Base
;       LOCATION:  1...1
;       OTHER INFORMATION:
;       NAME/KEY:  Modified Base
;       LOCATION:  2...2
;       OTHER INFORMATION:
US-08-807-104-14

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 88
US-08-807-104-15
; Sequence 15, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
;      REFERENCE/DOCKET NUMBER:  19406DA
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  732-594-4678
;      TELEFAX:  732-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  13...13
;      OTHER INFORMATION:
US-08-807-104-15

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 89
US-08-807-104-16
; Sequence 16, Application US/08807104
; Patent No. 5861501
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND
;    TITLE OF INVENTION:  APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MICHAEL D. YABLONSKY - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/807,104
;      FILING DATE:  04-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  YABLONSKY, MICHAEL D
;      REGISTRATION NUMBER:  40,407
;      REFERENCE/DOCKET NUMBER:  19406DA
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  732-594-4678
;      TELEFAX:  732-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  16:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
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    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  12...12
      OTHER INFORMATION:
S-08-807-104-16

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative    12;  Mismatches    2;  Indels    0;  Gaps    0;

y       1521 TTTATATTTTTAACTTT 1537
             ::: :|:::::|| :::
b          2 UUUUUAUUUUUAAUUUU 18


ESULT 90
S-08-973-139-1
 Sequence 1, Application US/08973139
 Patent No. 6100028
  GENERAL INFORMATION:
    APPLICANT:  Cole, James L.
    APPLICANT:  Olsen, David B.
    APPLICANT:  Kuo, Lawrence C.
    TITLE OF INVENTION:  DNA POLYMERASE EXTENSION ASSAY
    NUMBER OF SEQUENCES:  5
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Ms. Joanne J. Giesser
      STREET:  126 E. Lincoln Avenue, P.O. Box 2000-0907
      CITY:  Rahway
      STATE:  New Jersey
      COUNTRY:  USA
      ZIP:  07065
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/973,139
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  US/08/487,760
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME:  Giesser, Joanne M.
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19398
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (908)-594-3046
      TELEFAX:  (908)-594-4720
  INFORMATION FOR SEQ ID NO:  1:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
3-08-973-139-1

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative    12;  Mismatches    2;  Indels    0;  Gaps    0;

       1521 TTTATATTTTTAACTTT 1537
            ::: :|:::::|| :::
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Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 91
US-08-480-068-1
; Sequence 1, Application US/08480068
; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/480,068
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
US-08-480-068-1

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative    12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
             ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 92
US-08-480-068-4
; Sequence 4, Application US/08480068
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; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/480,068
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
US-08-480-068-4

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 93
US-08-480-068-6
; Sequence 6, Application US/08480068
; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/480,068
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  13...13
;      OTHER INFORMATION:
US-08-480-068-6

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
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Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 94
US-08-480-068-7
; Sequence 7, Application US/08480068
; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
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      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  US
      ZIP:  07065-0907
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  FastSEQ Version 1.5
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/480,068
      FILING DATE:  07-JUN-1995
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME:  GIESSER, JOANNE M
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19406
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  908-594-3046
      TELEFAX:  908-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  7:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  13...13
      OTHER INFORMATION:
S-08-480-068-7

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

y       1521 TTTATATTTTTAACTTT 1537
             ::: :|:::::|| :::
b          2 UUUUUAUUUUUAAUUUU 18


ESULT 95
S-08-480-068-8
 Sequence 8, Application US/08480068
 Patent No. 6111095
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
;       STATE:  NJ
;       COUNTRY:  US
;       ZIP:  07065-0907
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  DOS
;       SOFTWARE:  FastSEQ Version 1.5
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/480,068
;       FILING DATE:  07-JUN-1995
;       CLASSIFICATION:  514
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:
;       FILING DATE:
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  GIESSER, JOANNE M
;       REGISTRATION NUMBER:  32,838
;       REFERENCE/DOCKET NUMBER:  19406
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  908-594-3046
;       TELEFAX:  908-594-4720
;       TELEX:
;   INFORMATION FOR SEQ ID NO:  8:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  19 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  Genomic RNA
;     HYPOTHETICAL:  NO
;     ANTI-SENSE:  NO
;     FRAGMENT TYPE:
;     ORIGINAL SOURCE:
;     FEATURE:
;       NAME/KEY:  Modified Base
;       LOCATION:  1...1
;       OTHER INFORMATION:
;       NAME/KEY:  Modified Base
;       LOCATION:  1...1
;       OTHER INFORMATION:
;       NAME/KEY:  Modified Base
;       LOCATION:  6...6
;       OTHER INFORMATION:
US-08-480-068-8

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 96
US-08-480-068-9
; Sequence 9, Application US/08480068
; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
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;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/480,068
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  6...6
;      OTHER INFORMATION:
US-08-480-068-9

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 97
US-08-480-068-10
; Sequence 10, Application US/08480068
; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/480,068
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  19...19
;      OTHER INFORMATION:
US-08-480-068-10

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 98
US-08-480-068-13
; Sequence 13, Application US/08480068
; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
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      APPLICATION NUMBER:  US/08/480,068
      FILING DATE:  07-JUN-1995
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME:  GIESSER, JOANNE M
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19406
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  908-594-3046
      TELEFAX:  908-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  13:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
3-08-480-068-13

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUUAAUUUU 18


ESULT 99
3-08-480-068-14
 Sequence 14, Application US/08480068
 Patent No. 6111095
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  US
      ZIP:  07065-0907
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  FastSEQ Version 1.5
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/480,068
      FILING DATE:  07-JUN-1995
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME:  GIESSER, JOANNE M
      REGISTRATION NUMBER:  32,838
;       REFERENCE/DOCKET NUMBER:  19406
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  908-594-3046
;       TELEFAX:  908-594-4720
;       TELEX:
;   INFORMATION FOR SEQ ID NO:  14:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  19 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  Genomic RNA
;     HYPOTHETICAL:  NO
;     ANTI-SENSE:  NO
;     FRAGMENT TYPE:
;     ORIGINAL SOURCE:
;     FEATURE:
;       NAME/KEY:  Modified Base
;       LOCATION:  1...1
;       OTHER INFORMATION:
;       NAME/KEY:  Modified Base
;       LOCATION:  1...1
;       OTHER INFORMATION:
;       NAME/KEY:  Modified Base
;       LOCATION:  2...2
;       OTHER INFORMATION:
US-08-480-068-14

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUUAAUUUU 18


RESULT 100
US-08-480-068-15
; Sequence 15, Application US/08480068
; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/480,068
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
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      TELEFAX:  908-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  15:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  13...13
      OTHER INFORMATION:
US-08-480-068-15

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 101
US-08-480-068-16
; Sequence 16, Application US/08480068
; Patent No. 6111095
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/480,068
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  16:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  12...12
;      OTHER INFORMATION:
US-08-480-068-16

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 102
US-08-973-137-1
; Sequence 1, Application US/08973137
; Patent No. 6369208
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/973,137
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
```

```
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
;-08-973-137-1

 Query Match              1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

       1521 TTTATATTTTTAACTTT 1537
            ::: :|:::::|| :::
          2 UUUUUAUUUUUAAUUUU 18


SULT 103
;-08-973-137-4
 Sequence 4, Application US/08973137
 Patent No. 6369208
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  US
      ZIP:  07065-0907
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  FastSEQ Version 1.5
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/973,137
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/480,068
      FILING DATE:  07-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME:  GIESSER, JOANNE M
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19406
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  908-594-3046
      TELEFAX:  908-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  4:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
;   ORIGINAL SOURCE:
;   FEATURE:
;     NAME/KEY:  Modified Base
;     LOCATION:  1...1
;     OTHER INFORMATION:
;     NAME/KEY:  Modified Base
;     LOCATION:  1...1
;     OTHER INFORMATION:
US-08-973-137-4

  Query Match              1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 104
US-08-973-137-6
; Sequence 6, Application US/08973137
; Patent No. 6369208
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/973,137
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
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      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  13...13
      OTHER INFORMATION:
US-08-973-137-6

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 105
US-08-973-137-7
 Sequence 7, Application US/08973137
 Patent No. 6369208
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  US
      ZIP:  07065-0907
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  PastSEQ Version 1.5
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/973,137
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/480,068
      FILING DATE:  07-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME:  GIESSER, JOANNE M
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19406
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  908-594-3046
      TELEFAX:  908-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  7:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  13...13
      OTHER INFORMATION:
US-08-973-137-7

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 106
US-08-973-137-8
 Sequence 8, Application US/08973137
 Patent No. 6369208
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSSE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  US
      ZIP:  07065-0907
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  PastSEQ Version 1.5
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/973,137
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/480,068
      FILING DATE:  07-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME:  GIESSER, JOANNE M
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19406
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  908-594-3046
      TELEFAX:  908-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  8:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  6...6
      OTHER INFORMATION:
US-08-973-137-8
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 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

y       1521 TTTATATTTTTAACTTT 1537
             ::: :|:::::|| :::
b          2 UUUUUAUUUUUAAUUUU 18


ESULT 107
S-08-973-137-9
 Sequence 9, Application US/08973137
 Patent No. 6369208
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  US
      ZIP:  07065-0907
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  PastSEQ Version 1.5
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/973,137
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/480,068
      FILING DATE:  07-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME:  GIESSER, JOANNE M
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19406
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  908-594-3046
      TELEFAX:  908-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  9:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
      NAME/KEY:  Modified Base
      LOCATION:  6...6
      OTHER INFORMATION:
S-08-973-137-9

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
   Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 108
US-08-973-137-10
; Sequence 10, Application US/08973137
; Patent No. 6369208
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/973,137
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  19...19
;      OTHER INFORMATION:
US-08-973-137-10

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
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                ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 109
US-08-973-137-13
; Sequence 13, Application US/08973137
; Patent No. 6369208
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
      CITY:  RAHWAY
      STATE:  NJ
      COUNTRY:  US
      ZIP:  07065-0907
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Diskette
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  DOS
      SOFTWARE:  FastSEQ Version 1.5
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/973,137
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/480,068
      FILING DATE:  07-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME:  GIESSER, JOANNE M
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19406
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  908-594-3046
      TELEFAX:  908-594-4720
      TELEX:
  INFORMATION FOR SEQ ID NO:  13:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  Genomic RNA
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:
    ORIGINAL SOURCE:
    FEATURE:
      NAME/KEY:  Modified Base
      LOCATION:  1...1
      OTHER INFORMATION:
US-08-973-137-13

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 110
US-08-973-137-14
; Sequence 14, Application US/08973137
; Patent No. 6369208
  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/973,137
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  2...2
;      OTHER INFORMATION:
US-08-973-137-14

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 111
US-08-973-137-15
; Sequence 15, Application US/08973137
; Patent No. 6369208
;  GENERAL INFORMATION:
;    APPLICANT:  BENSELER, FRITZ
;    APPLICANT:  COLE, JAMES L.
;    APPLICANT:  OLSEN, DAVID B.
```

```
;    APPLICANT:  KUO, LAWRENCE C.
;    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/973,137
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  13...13
;      OTHER INFORMATION:
S-08-973-137-15

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Y       1521 TTTATATTTTTAACTTT 1537
             ::: :|::::|| :::
D          2 UUUUUAUUUUUAAUUUU 18


ESULT 112
S-08-973-137-16
 Sequence 16, Application US/08973137
 Patent No. 6369208
  GENERAL INFORMATION:
    APPLICANT:  BENSELER, FRITZ
    APPLICANT:  COLE, JAMES L.
    APPLICANT:  OLSEN, DAVID B.
    APPLICANT:  KUO, LAWRENCE C.
    TITLE OF INVENTION:  CAPPED SYNTHETIC RNA, ANALOGS, AND APTAMERS
    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  JOANNE M. GIESSER - MERCK & CO., INC.
;      STREET:  126 EAST LINCOLN AVENUE - P.O. BOX 2000
;      CITY:  RAHWAY
;      STATE:  NJ
;      COUNTRY:  US
;      ZIP:  07065-0907
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/973,137
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/480,068
;      FILING DATE:  07-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  GIESSER, JOANNE M
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19406
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  908-594-3046
;      TELEFAX:  908-594-4720
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  16:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  Genomic RNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;    FEATURE:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  1...1
;      OTHER INFORMATION:
;      NAME/KEY:  Modified Base
;      LOCATION:  12...12
;      OTHER INFORMATION:
US-08-973-137-16

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 113
US-09-422-978-8817
; Sequence 8817, Application US/09422978
; Patent No. 6537751
; GENERAL INFORMATION:
;  APPLICANT: Cohen, Daniel
;  APPLICANT: Blumenfeld, Marta
;  APPLICANT: Chumakov, Ilya
;  TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
;  FILE REFERENCE: GENSET.020CP1
;  CURRENT APPLICATION NUMBER: US/09/422,978
;  CURRENT FILING DATE: 1999-10-20
;  EARLIER APPLICATION NUMBER: US 09/298,850
;  EARLIER FILING DATE: 1999-04-21
```

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;  EARLIER APPLICATION NUMBER: US 60/109,732
;  EARLIER FILING DATE: 1998-11-23
;  EARLIER APPLICATION NUMBER: US 60/082,614
;  EARLIER FILING DATE: 1998-04-21
;  NUMBER OF SEQ ID NOS: 11796
; SEQ ID NO 8817
;   LENGTH: 19
;   TYPE: DNA
;   ORGANISM: Homo Sapiens
;   FEATURE:
;   NAME/KEY: primer_bind
;   LOCATION: 1..19
;   OTHER INFORMATION: downstream amplification primer 99-18438 for SEQ 952, in compleme
US-09-422-978-8817

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   88.2%;  Pred. No. 1.7e+02;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1208 AACAAACAAACAATTGG 1224
              ||||||||||||| | |
Db          1 AACAAACAAACAACTAG 17


RESULT 114
PCT-US93-02259-7
; Sequence 7, Application PC/TUS9302259
;  GENERAL INFORMATION:
;    APPLICANT:  Fortina, Paolo
;    APPLICANT:  Surrey, Saul
;    TITLE OF INVENTION:  DIAGNOSIS OF CYSTIC FIBROSIS USING
;    TITLE OF INVENTION:  ALLELE SPECIFIC MULTIPLEX POLYMERASE  CHAIN REACTIONS
;    NUMBER OF SEQUENCES:  13
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Woodcock Washburn Kurtz Mackiewicz and Norris
;      STREET:  One Liberty Place - 46th Floor
;      CITY:  Philadelphia
;      STATE:  PA
;      COUNTRY:  U.S.A.
;      ZIP:  19103
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/02259
;      FILING DATE:  19930311
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Johnson, Philip S.
;      REGISTRATION NUMBER:  27,200
;      REFERENCE/DOCKET NUMBER:  CH-0224
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  215-568-3100
;      TELEFAX:  215-568-3439
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
PCT-US93-02259-7

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   88.2%;  Pred. No. 1.7e+02;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1435 AATTTCTTGCTGGTTGA 1451
              || |||||||| |||||
Db          2 AAATTCTTGCTCGTTGA 18


RESULT 115
PCT-US93-02259-8
; Sequence 8, Application PC/TUS9302259
;  GENERAL INFORMATION:
;    APPLICANT:  Fortina, Paolo
;    APPLICANT:  Surrey, Saul
;    TITLE OF INVENTION:  DIAGNOSIS OF CYSTIC FIBROSIS USING
;    TITLE OF INVENTION:  ALLELE SPECIFIC MULTIPLEX POLYMERASE  CHAIN REACTIONS
;    NUMBER OF SEQUENCES:  13
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Woodcock Washburn Kurtz Mackiewicz and Norris
;      STREET:  One Liberty Place - 46th Floor
;      CITY:  Philadelphia
;      STATE:  PA
;      COUNTRY:  U.S.A.
;      ZIP:  19103
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/02259
;      FILING DATE:  19930311
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Johnson, Philip S.
;      REGISTRATION NUMBER:  27,200
;      REFERENCE/DOCKET NUMBER:  CH-0224
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  215-568-3100
;      TELEFAX:  215-568-3439
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  NUCLEIC ACID
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
PCT-US93-02259-8

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   88.2%;  Pred. No. 1.7e+02;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1435 AATTTCTTGCTGGTTGA 1451
              || |||||||| |||||
Db          2 AAATTCTTGCTCGTTGA 18


RESULT 116
PCT-US96-08320-1
; Sequence 1, Application PC/TUS9608320
;  GENERAL INFORMATION:
;    APPLICANT:  Cole, James L.
;    APPLICANT:  Olsen, David B.
;    APPLICANT:  Kuo, Lawrence C.
;    TITLE OF INVENTION:  DNA POLYMERASE EXTENSION ASSAY FOR
;    TITLE OF INVENTION:  INFLUENZA VIRUS ENDONUCLEASE
;    NUMBER OF SEQUENCES:  5
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Ms. Joanne J. Giesser
;      STREET:  126 E. Lincoln Avenue, P.O. Box 2000-0907
;      CITY:  Rahway
;      STATE:  New Jersey
;      COUNTRY:  USA
;      ZIP:  07065
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
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;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US96/08320
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Giesser, Joanne M.
;      REGISTRATION NUMBER:  32,838
;      REFERENCE/DOCKET NUMBER:  19393 PCT
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (908)-594-3046
;      TELEFAX:  (908)-594-4720
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
CT-US96-08320-1

 Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
 Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
 Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

y       1521 TTTATATTTTTAACTTT 1537
             ::: :|:::::|| :::
b          2 UUUUUAUUUUUAAUUUU 18


ESULT 117
CT-US96-08330-1
 Sequence 1, Application PC/TUS9608330
  GENERAL INFORMATION:
    APPLICANT:  MERCK & CO., INC.
    APPLICANT:  Cole, James L.
    APPLICANT:  Olsen, David B.
    APPLICANT:  Kuo, Lawrence C.
    TITLE OF INVENTION:  DNA POLYMERASE EXTENSION ASSAY
    NUMBER OF SEQUENCES:  5
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Ms. Joanne J. Giesser
      STREET:  126 E. Lincoln Avenue, P.O. Box 2000-0907
      CITY:  Rahway
      STATE:  New Jersey
      COUNTRY:  USA
      ZIP:  07065
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  PCT/US96/08330
      FILING DATE:
      CLASSIFICATION:
    ATTORNEY/AGENT INFORMATION:
      NAME:  Giesser, Joanne M.
      REGISTRATION NUMBER:  32,838
      REFERENCE/DOCKET NUMBER:  19398 PCT
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (908)-594-3046
      TELEFAX:  (908)-594-4720
  INFORMATION FOR SEQ ID NO:  1:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
CT-US96-08330-1

  Query Match             1.1%;  Score 13.8;  DB 1;  Length 19;
  Best Local Similarity   17.6%;  Pred. No. 1.7e+02;
  Matches    3;  Conservative   12;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1521 TTTATATTTTTAACTTT 1537
              ::: :|:::::|| :::
Db          2 UUUUUAUUUUUAAUUUU 18


RESULT 118
US-08-123-449A-1
; Sequence 1, Application US/08123449A
; Patent No. 5583032
;  GENERAL INFORMATION:
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/123,449A
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/10103
;      FILING DATE:  10-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Fedrick, Michael F.
;      REGISTRATION NUMBER:  36,799
;      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  714-760-0404
;      TELEFAX:  714-760-9502
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
US-08-123-449A-1

  Query Match             1.1%;  Score 13.6;  DB 1;  Length 22;
  Best Local Similarity   80.0%;  Pred. No. 2.8e+02;
  Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1560 AAATTTTTTTTACTGTTTCT 1579
              |||||||||||  | ||| |
Db          2 AAATTTTTTTTTTTTTTTTT 21


RESULT 119
US-08-123-449A-2
; Sequence 2, Application US/08123449A
; Patent No. 5583032
;  GENERAL INFORMATION:
```

```
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/123,449A
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/10103
;      FILING DATE:  10-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Fedrick, Michael F.
;      REGISTRATION NUMBER:  36,799
;      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  714-760-0404
;      TELEFAX:  714-760-9502
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
US-08-123-449A-2

  Query Match             1.1%;  Score 13.6;  DB 1;  Length 22;
  Best Local Similarity   80.0%;  Pred. No. 2.8e+02;
  Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1560 AAATTTTTTTTACTGTTTCT 1579
              ||||||||||  | ||| |
Db          2 AAATTTTTTTTTTTTTTTTT 21


RESULT 120
US-08-458-050-1
; Sequence 1, Application US/08458050
; Patent No. 5677289
;  GENERAL INFORMATION:
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/458,050
;      FILING DATE:  01-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/123,449
;      FILING DATE:  17-SEP-1993
;      APPLICATION NUMBER:  PCT/US93/10103
;      FILING DATE:  10-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Fedrick, Michael F.
;      REGISTRATION NUMBER:  36,799
;      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  714-760-0404
;      TELEFAX:  714-760-9502
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
US-08-458-050-1

  Query Match             1.1%;  Score 13.6;  DB 1;  Length 22;
  Best Local Similarity   80.0%;  Pred. No. 2.8e+02;
  Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1560 AAATTTTTTTTACTGTTTCT 1579
              ||||||||||  | ||| |
Db          2 AAATTTTTTTTTTTTTTTTT 21


RESULT 121
US-08-458-050-2
; Sequence 2, Application US/08458050
; Patent No. 5677289
;  GENERAL INFORMATION:
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/458,050
;      FILING DATE:  01-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/123,449
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;       FILING DATE:  17-SEP-1993
;       APPLICATION NUMBER:  PCT/US93/10103
;       FILING DATE:  10-OCT-1993
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Fedrick, Michael F.
;       REGISTRATION NUMBER:  36,799
;       REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  714-760-0404
;       TELEFAX:  714-760-9502
;   INFORMATION FOR SEQ ID NO:  2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  22 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  cDNA
;     HYPOTHETICAL:  NO
;     ANTI-SENSE:  NO
;     FRAGMENT TYPE:
;     ORIGINAL SOURCE:
US-08-458-050-2

  Query Match             1.1%;  Score 13.6;  DB 1;  Length 22;
  Best Local Similarity   80.0%;  Pred. No. 2.8e+02;
  Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1560 AAATTTTTTTTACTGTTTCT 1579
              ||||||||||  | ||| |
Db          2 AAATTTTTTTTTTTTTTTTT 21


RESULT 122
US-08-950-196-1
; Sequence 1, Application US/08950196
; Patent No. 6271369
;  GENERAL INFORMATION:
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/950,196
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/123,449
;      FILING DATE:
;      APPLICATION NUMBER:  PCT/US93/10103
;      FILING DATE:  10-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Fedrick, Michael F.
;      REGISTRATION NUMBER:  36,799
;      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  714-760-0404
;      TELEFAX:  714-760-9502
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
US-08-950-196-1

  Query Match             1.1%;  Score 13.6;  DB 1;  Length 22;
  Best Local Similarity   80.0%;  Pred. No. 2.8e+02;
  Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1560 AAATTTTTTTTACTGTTTCT 1579
              ||||||||||  | ||| |
Db          2 AAATTTTTTTTTTTTTTTTT 21


RESULT 123
US-08-950-196-2
; Sequence 2, Application US/08950196
; Patent No. 6271369
;  GENERAL INFORMATION:
;    APPLICANT:  TORRENCE, PAUL
;    APPLICANT:  ROBERT, SILVERMAN
;    APPLICANT:  RATAN, MAITRA
;    APPLICANT:  KRYSTYNA, LESIAK
;    TITLE OF INVENTION:  METHOD OF CLEAVING SPECIFIC SEQUENCES
;    TITLE OF INVENTION:  OF RNA
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Knobbe, Martens, Olson and Bear
;      STREET:  620 Newport Center Drive
;      CITY:  Newport Beach
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92660
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS version
;      SOFTWARE:  FastSeq Version 1.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/950,196
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/123,449
;      FILING DATE:
;      APPLICATION NUMBER:  PCT/US93/10103
;      FILING DATE:  10-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Fedrick, Michael F.
;      REGISTRATION NUMBER:  36,799
;      REFERENCE/DOCKET NUMBER:  NIH034.001QPC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  714-760-0404
;      TELEFAX:  714-760-9502
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  22 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
US-08-950-196-2

  Query Match             1.1%;  Score 13.6;  DB 1;  Length 22;
```

```
 Best Local Similarity   80.0%;  Pred. No. 2.8e+02;
 Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

/       1560 AAATTTTTTTTACTGTTTCT 1579
             ||||||||||  | ||| |
>          2 AAATTTTTTTTTTTTTTTTT 21


ESULT 124
3-08-242-402-5/c
 Sequence 5, Application US/08242402
 Patent No. 5580967
  GENERAL INFORMATION:
    APPLICANT:  JOYCE, GERALD F
    TITLE OF INVENTION:  OPTIMIZED CATALYTIC DNA-CLEAVING
    TITLE OF INVENTION:  RIBOZYMES
    NUMBER OF SEQUENCES:  26
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  THE SCRIPPS RESEARCH INSTITUTE, OFFICE OF
      ADDRESSEE:  PATENT COUNSEL
      STREET:  10666 NORTH TORREY PINES ROAD, TPC 8
      CITY:  LA JOLLA
      STATE:  CA
      COUNTRY:  USA
      ZIP:  92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/242,402
      FILING DATE:  13-MAY-1994
      CLASSIFICATION:  435
    ATTORNEY/AGENT INFORMATION:
      NAME:  LOGAN, APRIL C
      REGISTRATION NUMBER:  33,950
      REFERENCE/DOCKET NUMBER:  TSRI 412.0
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  619-554-2937
      TELEFAX:  619-554-6312
  INFORMATION FOR SEQ ID NO:  5:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA (genomic)
US-08-242-402-5

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   93.3%;  Pred. No. 1.1e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db         15 TTTATTTATTTATTT 1


RESULT 125
US-08-242-402-21
; Sequence 21, Application US/08242402
; Patent No. 5580967
;  GENERAL INFORMATION:
;    APPLICANT:  JOYCE, GERALD F
;    TITLE OF INVENTION:  OPTIMIZED CATALYTIC DNA-CLEAVING
;    TITLE OF INVENTION:  RIBOZYMES
;    NUMBER OF SEQUENCES:  26
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  THE SCRIPPS RESEARCH INSTITUTE, OFFICE OF
;      ADDRESSEE:  PATENT COUNSEL
;      STREET:  10666 NORTH TORREY PINES ROAD, TPC 8
;      CITY:  LA JOLLA
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/242,402
;      FILING DATE:  13-MAY-1994
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  LOGAN, APRIL C
;      REGISTRATION NUMBER:  33,950
;      REFERENCE/DOCKET NUMBER:  TSRI 412.0
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-554-2937
;      TELEFAX:  619-554-6312
;  INFORMATION FOR SEQ ID NO:  21:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-242-402-21

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   93.3%;  Pred. No. 1.1e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db          1 TTTATTTATTTATTT 15


RESULT 126
US-08-270-180-6
; Sequence 6, Application US/08270180
; Patent No. 5595873
;  GENERAL INFORMATION:
;    APPLICANT:  Joyce, Gerald F.
;    TITLE OF INVENTION:  ENZYMATIC RNA MOLECULES THAT CLEAVE
;    TITLE OF INVENTION:  AMIDE BONDS
;    NUMBER OF SEQUENCES:  20
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  The Scripps Research Institute, Office of
;      ADDRESSEE:  Patent Counsel
;      STREET:  10666 No. 5595873th Torrey Pines Road, TPC-8
;      CITY:  La Jolla
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/270,180
;      FILING DATE:  01-JUL-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/242,402
;      FILING DATE:  13-MAY-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Logan, April C.
;      REGISTRATION NUMBER:  33,950
;      REFERENCE/DOCKET NUMBER:  TSRI 412.1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-554-2937
;      TELEFAX:  619-554-6312
```

INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
3-08-270-180-6

Query Match 1.1%; Score 13.4; DB 1; Length 15;
Best Local Similarity 93.3%; Pred. No. 1.1e+02;
Matches 14; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1047 TTTATGTATTTATTT 1061
||||| |||||||||
Db 1 TTTATTTATTTATTT 15

RESULT 127
3-08-311-486C-190
Sequence 190, Application US/08311486C
Patent No. 5811300
GENERAL INFORMATION:
APPLICANT: Sean Sullivan
APPLICANT: Kenneth Draper
APPLICANT: Kevin Kisich
APPLICANT: Dan T. Stinchcomb
APPLICANT: James McSwiggen
TITLE OF INVENTION: RIBOZYME TREATMENT OF
TITLE OF INVENTION: DISEASES OR CONDITIONS
TITLE OF INVENTION: RELATED TO LEVELS OF
TITLE OF INVENTION: TNF-`
NUMBER OF SEQUENCES: 1157
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/311,486C
FILING DATE: September 23, 1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA: including application
PRIOR APPLICATION DATA: described below: two
APPLICATION NUMBER: 08/008,895
FILING DATE: January 19, 1993
APPLICATION NUMBER: 07/989,849
FILING DATE: December 7, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 209/166
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 190:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
3-08-311-486C-190

Query Match 1.1%; Score 13.4; DB 1; Length 15;
Best Local Similarity 26.7%; Pred. No. 1.1e+02;
Matches 4; Conservative 10; Mismatches 1; Indels 0; Gaps 0;

Qy 1039 ATTTATTATTTATGT 1053
|:::|::|:::|: :
Db 1 AUUUAUUAUUUAUUU 15

RESULT 128
US-08-311-486C-191
; Sequence 191, Application US/08311486C
; Patent No. 5811300
; GENERAL INFORMATION:
; APPLICANT: Sean Sullivan
; APPLICANT: Kenneth Draper
; APPLICANT: Kevin Kisich
; APPLICANT: Dan T. Stinchcomb
; APPLICANT: James McSwiggen
; TITLE OF INVENTION: RIBOZYME TREATMENT OF
; TITLE OF INVENTION: DISEASES OR CONDITIONS
; TITLE OF INVENTION: RELATED TO LEVELS OF
; TITLE OF INVENTION: TNF-`
; NUMBER OF SEQUENCES: 1157
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Lyon & Lyon
; STREET: 633 West Fifth Street
; STREET: Suite 4700
; CITY: Los Angeles
; STATE: California
; COUNTRY: U.S.A.
; ZIP: 90071-2066
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; MEDIUM TYPE: storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: IBM P.C. DOS 5.0
; SOFTWARE: Word Perfect 5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/311,486C
; FILING DATE: September 23, 1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; PRIOR APPLICATION DATA: including application
; PRIOR APPLICATION DATA: described below: two
; APPLICATION NUMBER: 08/008,895
; FILING DATE: January 19, 1993
; APPLICATION NUMBER: 07/989,849
; FILING DATE: December 7, 1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Warburg, Richard J.
; REGISTRATION NUMBER: 32,327
; REFERENCE/DOCKET NUMBER: 209/166
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
; INFORMATION FOR SEQ ID NO: 191:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 15 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-311-486C-191

Query Match 1.1%; Score 13.4; DB 1; Length 15;
Best Local Similarity 26.7%; Pred. No. 1.1e+02;
Matches 4; Conservative 10; Mismatches 1; Indels 0; Gaps 0;

Qy 1041 TTATTATTTATGTAT 1055
::|::|:::|: :|:
Db 1 UUAUUAUUUAUUUAU 15

```
RESULT 129
US-08-311-486C-192
; Sequence 192, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  192:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-192

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1042 TATTATTTATGTATT 1056
              :|::|:::|: :|::
Db          1 UAUUAUUUAUUUAUU 15


RESULT 130
US-08-311-486C-198
; Sequence 198, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  198:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-198

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1039 ATTTATTATTTATGT 1053
              |:::|::|:::|: :
Db          1 AUUUAUUAUUUAUUU 15


RESULT 131
US-08-311-486C-199
; Sequence 199, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
```

```
    NUMBER OF SEQUENCES:  1157
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  199:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
3-08-311-486C-199

 Query Match              1.1%;  Score 13.4;  DB 1;  Length 15;
 Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
 Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

       1041 TTATTATTTATGTAT 1055
            ::|::|:::|: :|:
          1 UUAUUAUUUAUUUAU 15


SULT 132
3-08-311-486C-200
Sequence 200, Application US/08311486C
Patent No. 5811300
 GENERAL INFORMATION:
   APPLICANT:  Sean Sullivan
   APPLICANT:  Kenneth Draper
   APPLICANT:  Kevin Kisich
   APPLICANT:  Dan T. Stinchcomb
   APPLICANT:  James McSwiggen
   TITLE OF INVENTION:  RIBOZYME TREATMENT OF
   TITLE OF INVENTION:  DISEASES OR CONDITIONS
   TITLE OF INVENTION:  RELATED TO LEVELS OF
   TITLE OF INVENTION:  TNF-'
   NUMBER OF SEQUENCES:  1157
   CORRESPONDENCE ADDRESS:
     ADDRESSEE:  Lyon & Lyon
     STREET:  633 West Fifth Street
     STREET:  Suite 4700
     CITY:  Los Angeles
     STATE:  California
     COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  200:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-200

  Query Match              1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1042 TATTATTTATGTATT 1056
              :|::|:::|: :|::
Db          1 UAUUAUUUAUUUAUU 15


RESULT 133
US-08-311-486C-201
; Sequence 201, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
```

```
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  201:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
!S-08-311-486C-201

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

)y       1043 ATTATTTATGTATTT 1057
              |::|:::|: :|:::
)b          1 AUUAUUUAUUUAUUU 15


!ESULT 134
!S-08-311-486C-709
  Sequence 709, Application US/08311486C
  Patent No. 5811300
   GENERAL INFORMATION:
     APPLICANT:  Sean Sullivan
     APPLICANT:  Kenneth Draper
     APPLICANT:  Kevin Kisich
     APPLICANT:  Dan T. Stinchcomb
     APPLICANT:  James McSwiggen
     TITLE OF INVENTION:  RIBOZYME TREATMENT OF
     TITLE OF INVENTION:  DISEASES OR CONDITIONS
     TITLE OF INVENTION:  RELATED TO LEVELS OF
     TITLE OF INVENTION:  TNF-`
     NUMBER OF SEQUENCES:  1157
     CORRESPONDENCE ADDRESS:
       ADDRESSEE:  Lyon & Lyon
       STREET:  633 West Fifth Street
       STREET:  Suite 4700
       CITY:  Los Angeles
       STATE:  California
       COUNTRY:  U.S.A.
       ZIP:  90071-2066
     COMPUTER READABLE FORM:
       MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
       MEDIUM TYPE:  storage
       COMPUTER:  IBM Compatible
       OPERATING SYSTEM:  IBM P.C. DOS 5.0
       SOFTWARE:  Word Perfect 5.1
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER:  US/08/311,486C
       FILING DATE:  September 23, 1994
       CLASSIFICATION:  435
     PRIOR APPLICATION DATA:
     PRIOR APPLICATION DATA:  including application
     PRIOR APPLICATION DATA:  described below:                    two
       APPLICATION NUMBER:  08/008,895
       FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  709:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-709

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1039 ATTTATTATTTATGT 1053
              |:::|::|:::|: :
Db          1 AUUUAUUAUUUAUUU 15


RESULT 135
US-08-311-486C-710
; Sequence 710, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-`
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
```

```
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  710:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
S-08-311-486C-710

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
 Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
 Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

y       1039 ATTTATTATTTATGT 1053
             |:::|::|:::|: :
b          1 AUUUAUUAUUUAUUU 15


ESULT 136
S-08-311-486C-711
 Sequence 711, Application US/08311486C
 Patent No. 5811300
  GENERAL INFORMATION:
    APPLICANT:  Sean Sullivan
    APPLICANT:  Kenneth Draper
    APPLICANT:  Kevin Kisich
    APPLICANT:  Dan T. Stinchcomb
    APPLICANT:  James McSwiggen
    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
    TITLE OF INVENTION:  DISEASES OR CONDITIONS
    TITLE OF INVENTION:  RELATED TO LEVELS OF
    TITLE OF INVENTION:  TNF-`
    NUMBER OF SEQUENCES:  1157
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  711:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
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```
US-08-311-486C-711

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1039 ATTTATTATTTATGT 1053
              |:::|::|:::|: :
Db          1 AUUUAUUAUUUAUUU 15


RESULT 137
US-08-311-486C-712
; Sequence 712, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-`
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  712:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-712

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1041 TTATTATTTATGTAT 1055
              ::|::|:::|: :|:
```

```
Db          1 UUAUUAUUUAUUUAU 15


RESULT 138
US-08-311-486C-713
; Sequence 713, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  713:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-713

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1041 TTATTATTTATGTAT 1055
              ::|::|:::|: :|:
Db          1 UUAUUAUUUAUUUAU 15


RESULT 139
US-08-311-486C-714
; Sequence 714, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  714:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-714

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1041 TTATTATTTATGTAT 1055
              ::|::|:::|: :|:
Db          1 UUAUUAUUUAUUUAU 15


RESULT 140
US-08-311-486C-715
; Sequence 715, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
```

```
    TITLE OF INVENTION:  TNF-'
    NUMBER OF SEQUENCES:  1157
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  715:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
3-08-311-486C-715

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
 Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
 Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

r       1042 TATTATTTATGTATT 1056
             :|::|:::|: :|::
>          1 UAUUAUUUAUUUAUU 15


ESULT 141
3-08-311-486C-716
 Sequence 716, Application US/08311486C
 Patent No. 5811300
  GENERAL INFORMATION:
    APPLICANT:  Sean Sullivan
    APPLICANT:  Kenneth Draper
    APPLICANT:  Kevin Kisich
    APPLICANT:  Dan T. Stinchcomb
    APPLICANT:  James McSwiggen
    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
    TITLE OF INVENTION:  DISEASES OR CONDITIONS
    TITLE OF INVENTION:  RELATED TO LEVELS OF
    TITLE OF INVENTION:  TNF-'
    NUMBER OF SEQUENCES:  1157
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
;       COUNTRY:  U.S.A.
;       ZIP:  90071-2066
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;       MEDIUM TYPE:  storage
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  IBM P.C. DOS 5.0
;       SOFTWARE:  Word Perfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/311,486C
;       FILING DATE:  September 23, 1994
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;     PRIOR APPLICATION DATA:  including application
;     PRIOR APPLICATION DATA:  described below:                    two
;       APPLICATION NUMBER:  08/008,895
;       FILING DATE:  January 19, 1993
;       APPLICATION NUMBER:  07/989,849
;       FILING DATE:  December 7, 1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard J.
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  209/166
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;   INFORMATION FOR SEQ ID NO:  716:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  15 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-311-486C-716

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative   10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1042 TATTATTTATGTATT 1056
              :|::|:::|: :|::
Db          1 UAUUAUUUAUUUAUU 15


RESULT 142
US-08-311-486C-721
; Sequence 721, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
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;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  721:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-721

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   26.7%;  Pred. No. 1.1e+02;
  Matches    4;  Conservative    10;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1043 ATTATTTATGTATTT 1057
              |::|:::|: :|:::
Db          1 AUUAUUUAUUUAUUU 15


RESULT 143
US-08-500-635A-13/c
; Sequence 13, Application US/08500635A
; Patent No. 5955072
;  GENERAL INFORMATION:
;    APPLICANT:  TAKAHASHI, Tohru
;    APPLICANT:  SERIZAWA, No. 5955072ufusa
;    APPLICANT:  KOISHI, Ryuta
;    APPLICANT:  KAWASHIMA, Ichiro
;    TITLE OF INVENTION:  EXPRESSION SYSTEMS UTILIZING
;    TITLE OF INVENTION:  AUTOLYZING FUSION PROTEINS
;    TITLE OF INVENTION:  AND A NOVEL REDUCING POLYPEPTIDE
;    NUMBER OF SEQUENCES:  19
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Frishhauf, Holtz, Goodman, Langer & Chick, P.C.
;      STREET:  767 Third Avenue-25th Floor
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  United States
;      ZIP:  10017-2023
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.24
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/500,635A
;      FILING DATE:  11-JUL-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  JP 6-161053
;      FILING DATE:  13-JUL-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  JP 6-218392
;      FILING DATE:  13-SEP-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  JP 6-303809
;      FILING DATE:  07-DEC-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Goodman, Herbert
;      REGISTRATION NUMBER:  17081
;      REFERENCE/DOCKET NUMBER:  950376/HG
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212) 319-4900
;      TELEFAX:  (212) 319-5101
;      TELEX:  236268
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  other nucleic acid, synthetic DNA
;    HYPOTHETICAL:  N
;    ANTI-SENSE:  N
US-08-500-635A-13

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   93.3%;  Pred. No. 1.1e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1044 TTATTTATGTATTTA 1058
              ||||||||.||||||
Db         15 TTATTTATTTATTTA 1


RESULT 144
US-08-682-423-6
; Sequence 6, Application US/08682423
; Patent No. 6063566
;  GENERAL INFORMATION:
;    APPLICANT:  Joyce, Gerald F.
;    TITLE OF INVENTION:  NOVEL CATALYTIC RNA MOLECULES
;    NUMBER OF SEQUENCES:  31
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  The Scripps Research Institute, Office of
;      ADDRESSEE:  Patent Counsel
;      STREET:  10666 No. 6063566th Torrey Pines Road, TPC-8
;      CITY:  La Jolla
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/682,423
;      FILING DATE:  17-JUL-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/242,402
;      FILING DATE:  13-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/270,180
;      FILING DATE:  01-JUL-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Logan, April C.
;      REGISTRATION NUMBER:  33,950
;      REFERENCE/DOCKET NUMBER:  TSRI 412.2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-554-2937
;      TELEFAX:  619-554-6312
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
```

```
    MOLECULE TYPE:  DNA (genomic)
US-08-682-423-6

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
 Best Local Similarity   93.3%;  Pred. No. 1.1e+02;
 Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db          1 TTTATTTATTTATTT 15


RESULT 145
US-08-682-423-21/c
 Sequence 21, Application US/08682423
 Patent No. 6063566
  GENERAL INFORMATION:
    APPLICANT:  Joyce, Gerald F.
    TITLE OF INVENTION:  NOVEL CATALYTIC RNA MOLECULES
    NUMBER OF SEQUENCES:  31
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  The Scripps Research Institute, Office of
      ADDRESSEE:  Patent Counsel
      STREET:  10666 No. 6063566th Torrey Pines Road, TPC-8
      CITY:  La Jolla
      STATE:  California
      COUNTRY:  USA
      ZIP:  92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/682,423
      FILING DATE:  17-JUL-1996
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  US 08/242,402
      FILING DATE:  13-MAY-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  US 08/270,180
      FILING DATE:  01-JUL-1994
    ATTORNEY/AGENT INFORMATION:
      NAME:  Logan, April C.
      REGISTRATION NUMBER:  33,950
      REFERENCE/DOCKET NUMBER:  TSRI 412.2
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  619-554-2937
      TELEFAX:  619-554-6312
  INFORMATION FOR SEQ ID NO:  21:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA (genomic)
US-08-682-423-21

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
 Best Local Similarity   93.3%;  Pred. No. 1.1e+02;
 Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db         15 TTTATTTATTTATTT 1


RESULT 146
US-09-167-151-13/c
 Sequence 13, Application US/09167151
 Patent No. 6307038
   GENERAL INFORMATION:
;       APPLICANT: TAKAHASHI, Tohru
;                  SERIZAWA, No. 6307038ufusa
;                  KOISHI, Ryuta
;                  KAWASHIMA, Ichiro
;       TITLE OF INVENTION: EXPRESSION SYSTEMS UTILIZING
;                           AUTOLYZING FUSION PROTEINS
;                           AND A NOVEL REDUCING POLYPEPTIDE
;       NUMBER OF SEQUENCES: 19
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Frishhauf, Holtz, Goodman, Langer & Chick, P.C.
;            STREET: 767 Third Avenue-25th Floor
;            CITY: New York
;            STATE: New York
;            COUNTRY: United States
;            ZIP: 10017-2023
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.24
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/167,151
;            FILING DATE: 06-Oct-1998
;            CLASSIFICATION: <Unknown>
;                            13-SEP-1994
;                            07-DEC-1994
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: 08/500,635
;            FILING DATE: <Unknown>
;            APPLICATION NUMBER: JP 6-218392
;            FILING DATE: 13-SEP-1994
;            APPLICATION NUMBER: JP 6-303809
;            FILING DATE: 07-DEC-1994
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Goodman, Herbert
;            REGISTRATION NUMBER: 17081
;            REFERENCE/DOCKET NUMBER: 950376/HG
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: (212) 319-4900
;            TELEFAX: (212) 319-5101
;            TELEX: 236268
;   INFORMATION FOR SEQ ID NO: 13:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 15 base pairs
;            TYPE: nucleic acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       MOLECULE TYPE: other nucleic acid, synthetic DNA
;       HYPOTHETICAL: N
;       ANTI-SENSE: N
;       SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-09-167-151-13

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   93.3%;  Pred. No. 1.1e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1044 TTATTTATGTATTTA 1058
              ||||||| |||||||
Db         15 TTATTTATTTATTTA 1


RESULT 147
PCT-US95-05141-6
; Sequence 6, Application PC/TUS9505141
;  GENERAL INFORMATION:
;    APPLICANT:
;    TITLE OF INVENTION:  NOVEL ENZYMATIC RNA MOLECULES
;    NUMBER OF SEQUENCES:  29
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
```

```
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US95/05141
;       FILING DATE:  26-APR-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/242,402
;       FILING DATE:  13-MAY-1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/270,180
;       FILING DATE:  01-JUL-1994
;   INFORMATION FOR SEQ ID NO:  6:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  15 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
PCT-US95-05141-6

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   93.3%;  Pred. No. 1.1e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db          1 TTTATTTATTTATTT 15


RESULT 148
PCT-US95-05141-21/c
; Sequence 21, Application PC/TUS9505141
;  GENERAL INFORMATION:
;    APPLICANT:
;    TITLE OF INVENTION:  NOVEL ENZYMATIC RNA MOLECULES
;    NUMBER OF SEQUENCES:  29
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/05141
;      FILING DATE:  26-APR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/242,402
;      FILING DATE:  13-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/270,180
;      FILING DATE:  01-JUL-1994
;   INFORMATION FOR SEQ ID NO:  21:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
PCT-US95-05141-21

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 15;
  Best Local Similarity   93.3%;  Pred. No. 1.1e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db         15 TTTATTTATTTATTT 1


RESULT 149
US-08-242-402-7
; Sequence 7, Application US/08242402
; Patent No. 5580967
;  GENERAL INFORMATION:
;    APPLICANT:  JOYCE, GERALD F
;    TITLE OF INVENTION:  OPTIMIZED CATALYTIC DNA-CLEAVING
;    TITLE OF INVENTION:  RIBOZYMES
;    NUMBER OF SEQUENCES:  26
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  THE SCRIPPS RESEARCH INSTITUTE, OFFICE OF
;      ADDRESSEE:  PATENT COUNSEL
;      STREET:  10666 NORTH TORREY PINES ROAD, TPC 8
;      CITY:  LA JOLLA
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/242,402
;      FILING DATE:  13-MAY-1994
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  LOGAN, APRIL C
;      REGISTRATION NUMBER:  33,950
;      REFERENCE/DOCKET NUMBER:  TSRI 412.0
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619-554-2937
;      TELEFAX:  619-554-6312
;   INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  16 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-242-402-7

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 16;
  Best Local Similarity   93.3%;  Pred. No. 1.3e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db          1 TTTATTTATTTATTT 15


RESULT 150
US-08-242-402-12/c
; Sequence 12, Application US/08242402
; Patent No. 5580967
;  GENERAL INFORMATION:
;    APPLICANT:  JOYCE, GERALD F
;    TITLE OF INVENTION:  OPTIMIZED CATALYTIC DNA-CLEAVING
;    TITLE OF INVENTION:  RIBOZYMES
;    NUMBER OF SEQUENCES:  26
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  THE SCRIPPS RESEARCH INSTITUTE, OFFICE OF
;      ADDRESSEE:  PATENT COUNSEL
;      STREET:  10666 NORTH TORREY PINES ROAD, TPC 8
;      CITY:  LA JOLLA
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/242,402
;      FILING DATE:  13-MAY-1994
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  LOGAN, APRIL C
```

REGISTRATION NUMBER: 33,950
REFERENCE/DOCKET NUMBER: TSRI 412.0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 16 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
S-08-242-402-12

Query Match 1.1%; Score 13.4; DB 1; Length 16;
Best Local Similarity 93.3%; Pred. No. 1.3e+02;
Matches 14; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Y 1047 TTTATGTATTTATTT 1061
||||| |||||||||
D 15 TTTATTTATTTATTT 1

ESULT 151
3-08-682-423-22
Sequence 22, Application US/08682423
Patent No. 6063566
GENERAL INFORMATION:
APPLICANT: Joyce, Gerald F.
TITLE OF INVENTION: NOVEL CATALYTIC RNA MOLECULES
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: The Scripps Research Institute, Office of
ADDRESSEE: Patent Counsel
STREET: 10666 No. 6063566th Torrey Pines Road, TPC-8
CITY: La Jolla
STATE: California
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/682,423
FILING DATE: 17-JUL-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/242,402
FILING DATE: 13-MAY-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/270,180
FILING DATE: 01-JUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: Logan, April C.
REGISTRATION NUMBER: 33,950
REFERENCE/DOCKET NUMBER: TSRI 412.2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
LENGTH: 16 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
3-08-682-423-22

Query Match 1.1%; Score 13.4; DB 1; Length 16;
Best Local Similarity 93.3%; Pred. No. 1.3e+02;
Matches 14; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1047 TTTATGTATTTATTT 1061
||||| |||||||||
Db 1 TTTATTTATTTATTT 15

RESULT 152
US-08-682-423-25/c
; Sequence 25, Application US/08682423
; Patent No. 6063566
; GENERAL INFORMATION:
; APPLICANT: Joyce, Gerald F.
; TITLE OF INVENTION: NOVEL CATALYTIC RNA MOLECULES
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: The Scripps Research Institute, Office of
; ADDRESSEE: Patent Counsel
; STREET: 10666 No. 6063566th Torrey Pines Road, TPC-8
; CITY: La Jolla
; STATE: California
; COUNTRY: USA
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/682,423
; FILING DATE: 17-JUL-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/242,402
; FILING DATE: 13-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/270,180
; FILING DATE: 01-JUL-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Logan, April C.
; REGISTRATION NUMBER: 33,950
; REFERENCE/DOCKET NUMBER: TSRI 412.2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619-554-2937
; TELEFAX: 619-554-6312
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 16 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-682-423-25

Query Match 1.1%; Score 13.4; DB 1; Length 16;
Best Local Similarity 93.3%; Pred. No. 1.3e+02;
Matches 14; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1047 TTTATGTATTTATTT 1061
||||| |||||||||
Db 15 TTTATTTATTTATTT 1

RESULT 153
PCT-US95-05141-22
; Sequence 22, Application PC/TUS9505141
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: NOVEL ENZYMATIC RNA MOLECULES
; NUMBER OF SEQUENCES: 29
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS

```
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/05141
;      FILING DATE:  26-APR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/242,402
;      FILING DATE:  13-MAY-1994
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER:  US 08/270,180
       FILING DATE:  01-JUL-1994
   INFORMATION FOR SEQ ID NO:  22:
     SEQUENCE CHARACTERISTICS:
       LENGTH:  16 base pairs
       TYPE:  nucleic acid
       STRANDEDNESS:  single
       TOPOLOGY:  linear
     MOLECULE TYPE:  DNA (genomic)
CT-US95-05141-22

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 16;
 Best Local Similarity   93.3%;  Pred. No. 1.3e+02;
 Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db          1 TTTATTTATTTATTT 15


RESULT 154
CT-US95-05141-25/c
 Sequence 25, Application PC/TUS9505141
  GENERAL INFORMATION:
    APPLICANT:
    TITLE OF INVENTION:  NOVEL ENZYMATIC RNA MOLECULES
    NUMBER OF SEQUENCES:  29
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  PCT/US95/05141
      FILING DATE:  26-APR-1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  US 08/242,402
      FILING DATE:  13-MAY-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  US 08/270,180
      FILING DATE:  01-JUL-1994
   INFORMATION FOR SEQ ID NO:  25:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  16 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA (genomic)
CT-US95-05141-25

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 16;
 Best Local Similarity   93.3%;  Pred. No. 1.3e+02;
 Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTT 1061
              ||||| |||||||||
Db         15 TTTATTTATTTATTT 1

ESULT 155
S-08-281-940-54/c
 Sequence 54, Application US/08281940
 Patent No. 5589330
  GENERAL INFORMATION:
    APPLICANT:  SHUBER, ANTHONY P.
;    TITLE OF INVENTION:  METHOD FOR MULTIPLE ALLELE-SPECIFIC
;    TITLE OF INVENTION:  DISEASE ANALYSIS
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  DARBY & DARBY P.C.
;      STREET:  805 THIRD AVENUE
;      CITY:  NEW YORK
;      STATE:  NEW YORK
;      COUNTRY:  USA
;      ZIP:  10022
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/281,940
;      FILING DATE:
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  LUDWIG, S. PETER
;      REGISTRATION NUMBER:  25351
;      REFERENCE/DOCKET NUMBER:  0372/09696
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  212/527-7700
;      TELEFAX:  212/753-6237
;      TELEX:  236687
;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    ORIGINAL SOURCE:
;      ORGANISM:  Homo sapien
;    IMMEDIATE SOURCE:
;      CLONE:  2184dAN
US-08-281-940-54

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1207 AAACAAACAAACAAT 1221
              ||||||| |||||||
Db         16 AAACAAAAAAACAAT 2


RESULT 156
US-08-373-124A-970/c
; Sequence 970, Application US/08373124A
; Patent No. 5646042
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
;    NUMBER OF SEQUENCES:  2627
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
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      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/373,124A
      FILING DATE:  January 13, 1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
      APPLICATION NUMBER:  08/192,943
      FILING DATE:  February 7, 1994
      APPLICATION NUMBER:  07/987,132
      FILING DATE:  December 7, 1992
      APPLICATION NUMBER:  07/936,422
      FILING DATE:  August 26, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/035
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  970:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
:-08-373-124A-970

 Query Match              1.1%;  Score 13.4;  DB 1;  Length 17;
 Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
 Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

'       1617 AAAATATAATTTGTT 1631
             ||||||||||||| ||
)         16 AAAATATAATTTTTT 2


:SULT 157
:-08-373-124A-2051/c
 Sequence 2051, Application US/08373124A
 Patent No. 5646042
  GENERAL INFORMATION:
    APPLICANT:  Stinchcomb, Dan T.
    APPLICANT:  Draper, Kenneth
    APPLICANT:  McSwiggen, James
    APPLICANT:  Jarvis, Thale
    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
    TITLE OF INVENTION:  CANCER USING RIBOZYMES
    NUMBER OF SEQUENCES:  2627
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/373,124A
      FILING DATE:  January 13, 1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
;     APPLICATION NUMBER:  08/192,943
;     FILING DATE:  February 7, 1994
;     APPLICATION NUMBER:  07/987,132
;     FILING DATE:  December 7, 1992
;     APPLICATION NUMBER:  07/936,422
;     FILING DATE:  August 26, 1992
;   ATTORNEY/AGENT INFORMATION:
;     NAME:  Warburg, Richard
;     REGISTRATION NUMBER:  32,327
;     REFERENCE/DOCKET NUMBER:  209/035
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE:  (213) 489-1600
;     TELEFAX:  (213) 955-0440
;     TELEX:  67-3510
; INFORMATION FOR SEQ ID NO:  2051:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH:  17 base pairs
;     TYPE:  nucleic acid
;     STRANDEDNESS:  single
;     TOPOLOGY:  linear
US-08-373-124A-2051

  Query Match              1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1617 AAAATATAATTTGTT 1631
              ||||||||||||| ||
Db         16 AAAATATAATTTTTT 2


RESULT 158
US-08-435-628-970/c
; Sequence 970, Application US/08435628
; Patent No. 5817796
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
;    NUMBER OF SEQUENCES:  2627
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,628
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/373,124
;      FILING DATE:  January 13, 1995
;      APPLICATION NUMBER:  08/245,466
;      FILING DATE:  May 18, 1994
;      APPLICATION NUMBER:  08/192,943
;      FILING DATE:  February 7, 1994
;      APPLICATION NUMBER:  07/987,132
;      FILING DATE:  December 7, 1992
;      APPLICATION NUMBER:  07/936,422
;      FILING DATE:  August 26, 1992
```

```
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/035
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  970:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
)S-08-435-628-970

  Query Match              1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1617 AAAATATAATTTGTT 1631
              ||||||||||||| ||
Db         16 AAAATATAATTTTTT 2


RESULT 159
)S-08-435-628-2051/c
; Sequence 2051, Application US/08435628
; Patent No. 5817796
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
;    NUMBER OF SEQUENCES:  2627
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,628
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/373,124
;      FILING DATE:  January 13, 1995
;      APPLICATION NUMBER:  08/245,466
;      FILING DATE:  May 18, 1994
;      APPLICATION NUMBER:  08/192,943
;      FILING DATE:  February 7, 1994
;      APPLICATION NUMBER:  07/987,132
;      FILING DATE:  December 7, 1992
;      APPLICATION NUMBER:  07/936,422
;      FILING DATE:  August 26, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/035
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  2051:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-435-628-2051

  Query Match              1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1617 AAAATATAATTTGTT 1631
              ||||||||||||| ||
Db         16 AAAATATAATTTTTT 2


RESULT 160
US-08-710-134-54/c
; Sequence 54, Application US/08710134
; Patent No. 5834181
;  GENERAL INFORMATION:
;    APPLICANT:  SHUBER, ANTHONY P.
;    TITLE OF INVENTION:  HIGH THROUGHPUT SCREENING METHOD FOR
;    TITLE OF INVENTION:  SEQUENCES OR GENETIC ALTERATIONS IN NUCLEIC ACIDS
;    NUMBER OF SEQUENCES:  65
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Genzyme Corporation
;      STREET:  One Mountain Road
;      CITY:  Framingham
;      STATE:  Massachusetts
;      COUNTRY:  USA
;      ZIP:  01701
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/710,134
;      FILING DATE:  13-SEP-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Dugan, Deborah A.
;      REGISTRATION NUMBER:  37,315
;      REFERENCE/DOCKET NUMBER:  IG5-8.1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  508-872-8400
;      TELEFAX:  508-872-5415
;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  other nucleic acid
;      DESCRIPTION:  /desc = "Oligonucleotides"
US-08-710-134-54

  Query Match              1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1207 AAACAAACAAACAAT 1221
              ||||||| |||||||
Db         16 AAACAAAAAAACAAT 2


RESULT 161
US-08-485-885-54/c
; Sequence 54, Application US/08485885
```

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Patent No. 5849483
 GENERAL INFORMATION:
   APPLICANT:  SHUBER, ANTHONY P.
   TITLE OF INVENTION:  HIGH THROUGHPUT SCREENING METHOD FOR
   TITLE OF INVENTION:  SEQUENCES OR GENETIC ALTERATIONS IN NUCLEIC ACIDS
   NUMBER OF SEQUENCES:  65
   CORRESPONDENCE ADDRESS:
     ADDRESSEE:  Genzyme Corporation
     STREET:  One Mountain Road
     CITY:  Framingham
     STATE:  Massachusetts
     COUNTRY:  USA
     ZIP:  01701
   COMPUTER READABLE FORM:
     MEDIUM TYPE:  Floppy disk
     COMPUTER:  IBM PC compatible
     OPERATING SYSTEM:  PC-DOS/MS-DOS
     SOFTWARE:  PatentIn Release #1.0, Version #1.30
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER:  US/08/485,885
     FILING DATE:  07-JUN-1995
     CLASSIFICATION:  435
   ATTORNEY/AGENT INFORMATION:
     NAME:  Dugan, Deborah A.
     REGISTRATION NUMBER:  37,315
     REFERENCE/DOCKET NUMBER:  GEN4-12.1
   TELECOMMUNICATION INFORMATION:
     TELEPHONE:  508-872-8400
     TELEFAX:  508-872-5415
 INFORMATION FOR SEQ ID NO:  54:
   SEQUENCE CHARACTERISTICS:
     LENGTH:  17 base pairs
     TYPE:  nucleic acid
     STRANDEDNESS:  single
     TOPOLOGY:  linear
   MOLECULE TYPE:  other nucleic acid
     DESCRIPTION:  /desc = "Oligonucleotides"
S-08-485-885-54

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 17;
 Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
 Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y       1207 AAACAAACAAACAAT 1221
             ||||||| |||||||
b         16 AAACAAAAAAACAAT 2


ESULT 162
S-08-584-040-2299/c
 Sequence 2299, Application US/08584040
 Patent No. 6346398
  GENERAL INFORMATION:
    APPLICANT:  Pavco, Pamela
    APPLICANT:  McSwiggen, James
    APPLICANT:  Stinchcomb, Dan T.
    APPLICANT:  Escobedo, Jaime
    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
    TITLE OF INVENTION:  TREATMENT OF DISEASES OR
    TITLE OF INVENTION:  CONDITIONS RELATED TO LEVELS
    TITLE OF INVENTION:  OF VASCULAR ENDOTHELIAL
    TITLE OF INVENTION:  GROWTH FACTOR
    NUMBER OF SEQUENCES:  8502
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;       MEDIUM TYPE:  storage
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  IBM P.C. DOS 5.0
;       SOFTWARE:  Word Perfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/584,040
;       FILING DATE:  January 11, 1996
;       CLASSIFICATION:  514
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  60/005,974
;       FILING DATE:  October 26, 1995
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard J.
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  218/064
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  2299:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  17 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-584-040-2299

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        749 TAGAATGTGATATTT 763
              ||||||||||| ||||
Db         17 TAGAATGTGACATTT 3


RESULT 163
US-08-584-040-2785
; Sequence 2785, Application US/08584040
; Patent No. 6346398
;  GENERAL INFORMATION:
;    APPLICANT:  Pavco, Pamela
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Escobedo, Jaime
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  TREATMENT OF DISEASES OR
;    TITLE OF INVENTION:  CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF VASCULAR ENDOTHELIAL
;    TITLE OF INVENTION:  GROWTH FACTOR
;    NUMBER OF SEQUENCES:  8502
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/584,040
;      FILING DATE:  January 11, 1996
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/005,974
;      FILING DATE:  October 26, 1995
;    ATTORNEY/AGENT INFORMATION:
```

```
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/064
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  2785:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
JS-08-584-040-2785

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   60.0%;  Pred. No. 1.6e+02;
  Matches    9;  Conservative    5;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        803 ATAAAGTCAAATTTA 817
              |:||| :||||:::|
Db          2 AUAAACUCAAAUUUA 16


RESULT 164
JS-08-584-040-7818/c
; Sequence 7818, Application US/08584040
; Patent No. 6346398
;  GENERAL INFORMATION:
;    APPLICANT:  Pavco, Pamela
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Escobedo, Jaime
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  TREATMENT OF DISEASES OR
;    TITLE OF INVENTION:  CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF VASCULAR ENDOTHELIAL
;    TITLE OF INVENTION:  GROWTH FACTOR
;    NUMBER OF SEQUENCES:  8502
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/584,040
;      FILING DATE:  January 11, 1996
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/005,974
;      FILING DATE:  October 26, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/064
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  7818:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-584-040-7818

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        616 ACAAAAAACAACAAA 630
              ||||||||||| |||
Db         15 ACAAAAAACAAAAAA 1


RESULT 165
US-09-371-772B-844/c
; Sequence 844, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions R
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 844
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
US-09-371-772B-844

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 17;
  Best Local Similarity   93.3%;  Pred. No. 1.6e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        749 TAGAATGTGATATTT 763
              |||||||||| ||||
Db         17 TAGAATGTGACATTT 3


RESULT 166
US-09-371-772B-1309
; Sequence 1309, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions R
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1309
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
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S-09-371-772B-1309

Query Match 1.1%; Score 13.4; DB 1; Length 17;
Best Local Similarity 60.0%; Pred. No. 1.6e+02;
Matches 9; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

y 803 ATAAAGTCAAATTTA 817
|:||| :||||:::|
b 2 AUAAACUCAAAUUUA 16

ESULT 167
S-09-371-772B-3602/c
Sequence 3602, Application US/09371772B
Patent No. 6566127
GENERAL INFORMATION:
APPLICANT: Ribozyme Pharmaceuticals, Inc.
APPLICANT: Pavco, Pam
APPLICANT: McSwiggen, Jim
APPLICANT: Stinchcomb, Dan
APPLICANT: Escobedo, Jaime
TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
TITLE OF INVENTION: Levels of Vascular Endothelial Growth Factor Receptor
FILE REFERENCE: MBHB00,876-J (237/198)
CURRENT APPLICATION NUMBER: US/09/371,772B
CURRENT FILING DATE: 1999-08-10
PRIOR APPLICATION NUMBER: US 60/005,974
PRIOR FILING DATE: 1995-10-26
PRIOR APPLICATION NUMBER: US 08/584,040
PRIOR FILING DATE: 1996-01-08
NUMBER OF SEQ ID NOS: 14225
SOFTWARE: PatentIn version 3.0
SEQ ID NO 3602
LENGTH: 17
TYPE: RNA
ORGANISM: Mus sp.
S-09-371-772B-3602

Query Match 1.1%; Score 13.4; DB 1; Length 17;
Best Local Similarity 93.3%; Pred. No. 1.6e+02;
Matches 14; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

y 616 ACAAAAAACAACAAA 630
||||||||||| |||
b 15 ACAAAAAACAAAAAA 1

ESULT 168
S-09-371-772B-5228/c
Sequence 5228, Application US/09371772B
Patent No. 6566127
GENERAL INFORMATION:
APPLICANT: Ribozyme Pharmaceuticals, Inc.
APPLICANT: Pavco, Pam
APPLICANT: McSwiggen, Jim
APPLICANT: Stinchcomb, Dan
APPLICANT: Escobedo, Jaime
TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
TITLE OF INVENTION: Levels of Vascular Endothelial Growth Factor Receptor
FILE REFERENCE: MBHB00,876-J (237/198)
CURRENT APPLICATION NUMBER: US/09/371,772B
CURRENT FILING DATE: 1999-08-10
PRIOR APPLICATION NUMBER: US 60/005,974
PRIOR FILING DATE: 1995-10-26
PRIOR APPLICATION NUMBER: US 08/584,040
PRIOR FILING DATE: 1996-01-08
NUMBER OF SEQ ID NOS: 14225
SOFTWARE: PatentIn version 3.0
SEQ ID NO 5228
LENGTH: 17
TYPE: RNA
ORGANISM: Homo sapiens
S-09-371-772B-5228

Query Match 1.1%; Score 13.4; DB 1; Length 17;
Best Local Similarity 93.3%; Pred. No. 1.6e+02;
Matches 14; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 749 TAGAATGTGATATTT 763
||||||||| ||||
Db 16 TAGAATGTGACATTT 2

RESULT 169
US-09-371-772B-5584
; Sequence 5584, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
; APPLICANT: Ribozyme Pharmaceuticals, Inc.
; APPLICANT: Pavco, Pam
; APPLICANT: McSwiggen, Jim
; APPLICANT: Stinchcomb, Dan
; APPLICANT: Escobedo, Jaime
; TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
; TITLE OF INVENTION: Levels of Vascular Endothelial Growth Factor Receptor
; FILE REFERENCE: MBHB00,876-J (237/198)
; CURRENT APPLICATION NUMBER: US/09/371,772B
; CURRENT FILING DATE: 1999-08-10
; PRIOR APPLICATION NUMBER: US 60/005,974
; PRIOR FILING DATE: 1995-10-26
; PRIOR APPLICATION NUMBER: US 08/584,040
; PRIOR FILING DATE: 1996-01-08
; NUMBER OF SEQ ID NOS: 14225
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 5584
; LENGTH: 17
; TYPE: RNA
; ORGANISM: Homo sapiens
US-09-371-772B-5584

Query Match 1.1%; Score 13.4; DB 1; Length 17;
Best Local Similarity 60.0%; Pred. No. 1.6e+02;
Matches 9; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Qy 803 ATAAAGTCAAATTTA 817
|:||| :||||:::|
Db 3 AUAAACUCAAAUUUA 17

RESULT 170
US-09-213-768-31
; Sequence 31, Application US/09213768
; Patent No. 5985664
; GENERAL INFORMATION:
; APPLICANT: Brenda P. Baker
; APPLICANT: Lex M. Cowsert
; TITLE OF INVENTION: ANTISENSE MODULATION OF SENTRIN EXPRESSION
; FILE REFERENCE: RTS-0026
; CURRENT APPLICATION NUMBER: US/09/213,768
; CURRENT FILING DATE: 1998-12-17
; NUMBER OF SEQ ID NOS: 47
; SEQ ID NO 31
; LENGTH: 18
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Antisense Oligonucleotide
US-09-213-768-31

Query Match 1.1%; Score 13.4; DB 1; Length 18;
Best Local Similarity 93.3%; Pred. No. 1.9e+02;
Matches 14; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1179 GATAAATTTCAATCA 1193
|||||| |||||||
Db 1 GATAAACTTCAATCA 15

```
RESULT 171
US-09-316-083-22
; Sequence 22, Application US/09316083A
; Patent No. 6280942
; GENERAL INFORMATION:
;  APPLICANT: The Institute of Physical and Chemical Research
;  TITLE OF INVENTION: Endonuclease
;  FILE REFERENCE: PH-651
;  CURRENT APPLICATION NUMBER: US/09/316,083A
;  CURRENT FILING DATE: 1999-05-20
;  EARLIER APPLICATION NUMBER: JP98/141861
;  EARLIER FILING DATE: 1998-05-22
;  NUMBER OF SEQ ID NOS: 38
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:Synthetic DNA
JS-09-316-083-22

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 18;
  Best Local Similarity   93.3%;  Pred. No. 1.9e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1282 ATTATTGTTTATCTG 1296
              ||||||| |||||||
Db          3 ATTATTGGTTATCTG 17


RESULT 172
US-09-933-700-22
; Sequence 22, Application US/09933700
; Patent No. 6528296
; GENERAL INFORMATION:
;  APPLICANT: The Institute of Physical and Chemical Research
;  TITLE OF INVENTION: Endonuclease
;  FILE REFERENCE: PH-651
;  CURRENT APPLICATION NUMBER: US/09/933,700
;  CURRENT FILING DATE:  2001-08-20
;  PRIOR APPLICATION NUMBER: 09/316,083
;  PRIOR FILING DATE: 1999-05-20
;  NUMBER OF SEQ ID NOS: 38
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:Synthetic DNA
JS-09-933-700-22

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 18;
  Best Local Similarity   93.3%;  Pred. No. 1.9e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1282 ATTATTGTTTATCTG 1296
              ||||||| |||||||
Db          3 ATTATTGGTTATCTG 17


RESULT 173
US-08-222-177A-345/c
; Sequence 345, Application US/08222177A
; Patent No. 5582979
;  GENERAL INFORMATION:
;    APPLICANT:  Weber, James L.
;    TITLE OF INVENTION:  LENGTH POLYMORPHISMS IN
;    TITLE OF INVENTION:  (dC-dA)n.(dG-dT)n SEQUENCES AND METHODS OF USING SAME
;    NUMBER OF SEQUENCES:  460
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  DeWitt Ross & Stevens, S.C.
;      STREET:  8000 Excelsior Drive, Suite 401
;      CITY:  Madison
;      STATE:  Wisconsin
;      COUNTRY:  USA
;      ZIP:  53717-1914
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/222,177A
;      FILING DATE:
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/341,562
;      FILING DATE:  21-APR-1989
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sara, Charles S.
;      REGISTRATION NUMBER:  30,492
;      REFERENCE/DOCKET NUMBER:  09865.601
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (608) 831-2100
;      TELEFAX:  (608) 831-2106
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  345:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  19 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
;    IMMEDIATE SOURCE:
;      CLONE:  mfd108p2
US-08-222-177A-345

  Query Match             1.1%;  Score 13.4;  DB 1;  Length 19;
  Best Local Similarity   93.3%;  Pred. No. 2.1e+02;
  Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        957 AGTGATGTTGTGAGG 971
              ||||||| ||||||
Db         17 AGTGATGTGGTGAGG 3


RESULT 174
US-08-468-551-8
; Sequence 8, Application US/08468551
; Patent No. 5874212
;  GENERAL INFORMATION:
;    APPLICANT:  Prockop, Darwin J.
;    APPLICANT:  Rock, Matthew J.
;    APPLICANT:  Ganguly, Arupa
;    TITLE OF INVENTION:  DETECTION OF SINGLE BASE MUTATIONS AND
;    TITLE OF INVENTION:  OTHER VARIATIONS IN DOUBLE STRANDED DNA BY
;    TITLE OF INVENTION:  CONFORMATION-SENSITIVE CELL ELECTROPHORESIS
;    NUMBER OF SEQUENCES:  9
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  PANITCH SCHWARZE JACOBS & NADEL, P.C.
;      STREET:  ONE COMMERCE SQUARE, 2005 MARKET STREET, 22ND
;      STREET:  FLOOR
;      CITY:  PHILADELPHIA
;      STATE:  PENNSYLVANIA
;      COUNTRY:  UNITED STATES
;      ZIP:  19103-7086
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
```

```
      APPLICATION NUMBER:  US/08/468,551
      FILING DATE:  06-JUN-1995
      CLASSIFICATION:  435
    ATTORNEY/AGENT INFORMATION:
      NAME:  Doyle Leary Ph.D., Kathryn
      REGISTRATION NUMBER:  36,317
      REFERENCE/DOCKET NUMBER:  9855-5U1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  215-965-1284
      TELEFAX:  215-567-2991
      TELEX:  831-494
  INFORMATION FOR SEQ ID NO:  8:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  19 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA (genomic)
S-08-468-551-8

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 19;
 Best Local Similarity   93.3%;  Pred. No. 2.1e+02;
 Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y        818 GCTGGAAATCCTGGA 832
             ||||||| ||||||
b          1 GCTGGAAAACCTGGA 15


ESULT 175
S-09-422-978-4969
 Sequence 4969, Application US/09422978
 Patent No. 6537751
 GENERAL INFORMATION:
  APPLICANT: Cohen, Daniel
  APPLICANT: Blumenfeld, Marta
  APPLICANT: Chumakov, Ilya
  TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
  FILE REFERENCE: GENSET.020CP1
  CURRENT APPLICATION NUMBER: US/09/422,978
  CURRENT FILING DATE: 1999-10-20
  EARLIER APPLICATION NUMBER: US 09/298,850
  EARLIER FILING DATE: 1999-04-21
  EARLIER APPLICATION NUMBER: US 60/109,732
  EARLIER FILING DATE: 1998-11-23
  EARLIER APPLICATION NUMBER: US 60/082,614
  EARLIER FILING DATE: 1998-04-21
  NUMBER OF SEQ ID NOS: 11796
 SEQ ID NO 4969
   LENGTH: 19
   TYPE: DNA
   ORGANISM: Homo Sapiens
   FEATURE:
   NAME/KEY: primer_bind
   LOCATION: 1..19
   OTHER INFORMATION: upstream amplification primer 99-1944 for SEQ 1035,
3-09-422-978-4969

 Query Match             1.1%;  Score 13.4;  DB 1;  Length 19;
 Best Local Similarity   93.3%;  Pred. No. 2.1e+02;
 Matches   14;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

y       1567 TTTTACTGTTTCTGA 1581
             ||||||||||||| |
b          1 TTTTACTGTTTCTCA 15


ESULT 176
3-08-271-942A-92/c
 Sequence 92, Application US/08271942A
 Patent No. 5550020
  GENERAL INFORMATION:
    APPLICANT:  Gallie, Brenda L.
;    APPLICANT:  Dunn, James M.
;    APPLICANT:  Stevens, John K.
;    TITLE OF INVENTION:  Method, Reagents and Kit for Diagnosis
;    TITLE OF INVENTION:  and Targeted Screening for Retinoblastoma
;    NUMBER OF SEQUENCES:  123
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Oppedahl & Larson
;      STREET:  1992 Commerce Street, Suite 309
;      CITY:  Yorktown Heights
;      STATE:  NY
;      COUNTRY:  USA
;      ZIP:  10598-4412
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.5 inch, 1.44 Mb
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS 5.0
;      SOFTWARE:  Word Perfect
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/271,942A
;      FILING DATE:  08-JUL-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Marina T. Larson
;      REGISTRATION NUMBER:  32,038
;      REFERENCE/DOCKET NUMBER:  VGEN.P-003-US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (914) 245-3252
;      TELEFAX:  (914) 962-4330
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  92:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  18
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  genomic DNA
;    HYPOTHETICAL:  no
;    ANTI-SENSE:  no
;    FRAGMENT TYPE:  internal
;    ORIGINAL SOURCE:
;      ORGANISM:  human
;    FEATURE:
;      NAME/KEY:  primer for exon 11 of human RB1 gene
US-08-271-942A-92

  Query Match             1.1%;  Score 13.2;  DB 1;  Length 18;
  Best Local Similarity   83.3%;  Pred. No. 2.1e+02;
  Matches   15;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1566 TTTTTACTGTTTCTGATT 1583
              ||| || |||||| ||||
Db         18 TTTATAGTGTTTCAGATT 1


RESULT 177
US-08-779-916A-92/c
; Sequence 92, Application US/08779916A
; Patent No. 6063567
;  GENERAL INFORMATION:
;    APPLICANT:  Gallie, Brenda L.
;    APPLICANT:  Dunn, James M.
;    APPLICANT:  Stevens, John K.
;    APPLICANT:  Hui, May
;    TITLE OF INVENTION:  Method, Reagents and Kit for Diagnosis
;    TITLE OF INVENTION:  and Targeted Screening for Retinoblastoma
;    NUMBER OF SEQUENCES:  123
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Oppedahl & Larson
;      STREET:  1992 Commerce Street, Suite 309
;      CITY:  Yorktown Heights
```

```
;       STATE:  NY
;       COUNTRY:  USA
;       ZIP:  10598-4412
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette, 3.5 inch, 1.44 Mb
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  DOS 5.0
;       SOFTWARE:  Word Perfect
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/779,916A
;       FILING DATE:  07-JAN-1997
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/271,942
;       FILING DATE:  08-JUL-1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Marina T. Larson
;       REGISTRATION NUMBER:  32,038
;       REFERENCE/DOCKET NUMBER:  VGEN.P-003-US2
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (914) 245-3252
;       TELEFAX:  (914) 962-4330
;       TELEX:
;   INFORMATION FOR SEQ ID NO:  92:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  18
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  genomic DNA
;     HYPOTHETICAL:  no
;     ANTI-SENSE:  no
;     FRAGMENT TYPE:  internal
;     ORIGINAL SOURCE:
;       ORGANISM:  human
;     FEATURE:
;       NAME/KEY:  primer for exon 11 of human RB1 gene
US-08-779-916A-92

  Query Match             1.1%;  Score 13.2;  DB 1;  Length 18;
  Best Local Similarity   83.3%;  Pred. No. 2.1e+02;
  Matches   15;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1566 TTTTTACTGTTTCTGATT 1583
              ||| || |||||| ||||
Db         18 TTTATAGTGTTTCAGATT 1


RESULT 178
US-09-474-922A-81/c
; Sequence 81, Application US/09474922A
; Patent No. 6187586
; GENERAL INFORMATION:
;   APPLICANT:      Brett P. Monia
;   APPLICANT:  Lex M. Cowsert
;   APPLICANT:  Richard A. Roth
;   TITLE OF INVENTION:      ANTISENSE MODULATION OF Akt-3 EXPRESSION
;   FILE REFERENCE:      RTS-0036
;   CURRENT APPLICATION NUMBER: US/09/474,922A
;   CURRENT FILING DATE:  1999-12-29
;   NUMBER OF SEQ ID NOS:      89
; SEQ ID NO 81
;    LENGTH: 18
;    TYPE: DNA
;    ORGANISM: Artificial Sequence
;    FEATURE:
;    OTHER INFORMATION: Antisense Oligonucleotide
US-09-474-922A-81

  Query Match             1.1%;  Score 13.2;  DB 1;  Length 18;
  Best Local Similarity   83.3%;  Pred. No. 2.1e+02;
  Matches   15;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1596 AAAAGTAAATATGAAACA 1613
              ||||| || ||||| |||
Db         18 AAAAGAAATTATGAGACA 1


RESULT 179
US-09-637-751A-6/c
; Sequence 6, Application US/09637751A
; Patent No. 6383754
; GENERAL INFORMATION:
;  APPLICANT:  Kaufman, Joseph C.
;  APPLICANT:  Roth, Matthew E.
;  APPLICANT:  Lizardi, Paul M.
;  APPLICANT:  Peng, Li
;  APPLICANT:  Latimer, Darin R.
;  TITLE OF INVENTION:  Binary Encoded Sequence Tags
; Patent No. 6383754
;  FILE REFERENCE:  AGL 100
;  CURRENT APPLICATION NUMBER: US/09/637,751A
;  CURRENT FILING DATE:  2000-08-11
;  NUMBER OF SEQ ID NOS:  10
;  SOFTWARE:  PatentIn Ver. 2.1
; SEQ ID NO 6
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Primer
US-09-637-751A-6

  Query Match             1.1%;  Score 13.2;  DB 1;  Length 18;
  Best Local Similarity   83.3%;  Pred. No. 2.1e+02;
  Matches   15;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        616 ACAAAAAACAACAAATAA 633
              |||||||| || ||| ||
Db         18 ACAAAAAAAAAAAAAAAA 1


RESULT 180
US-09-144-367-15
; Sequence 15, Application US/09144367
; Patent No. 6432639
; GENERAL INFORMATION:
;  APPLICANT: Lichter, Jay
;  APPLICANT:  Guido, Marco
;  TITLE OF INVENTION: GENOTYPING OF HUMAN CYP3A4
;  FILE REFERENCE: SEQ-12P
;  CURRENT APPLICATION NUMBER: US/09/144,367
;  CURRENT FILING DATE:  1998-08-31
;  PRIOR APPLICATION NUMBER: 60/058,612
;  PRIOR FILING DATE: 1997-09-10
;  NUMBER OF SEQ ID NOS: 58
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 15
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: H. sapiens
US-09-144-367-15

  Query Match             1.1%;  Score 13.2;  DB 1;  Length 18;
  Best Local Similarity   83.3%;  Pred. No. 2.1e+02;
  Matches   15;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy        414 CAAGAATCAGTGAAGATG 431
              |||||| ||| ||||| |
Db          1 CAAGAAACAGAGAAGAGG 18


RESULT 181
US-09-144-367-29
; Sequence 29, Application US/09144367
; Patent No. 6432639
```

GENERAL INFORMATION:
APPLICANT: Lichter, Jay
APPLICANT: Guido, Marco
TITLE OF INVENTION: GENOTYPING OF HUMAN CYP3A4
FILE REFERENCE: SEQ-12P
CURRENT APPLICATION NUMBER: US/09/144,367
CURRENT FILING DATE: 1998-08-31
PRIOR APPLICATION NUMBER: 60/058,612
PRIOR FILING DATE: 1997-09-10
NUMBER OF SEQ ID NOS: 58
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 29
LENGTH: 18
TYPE: DNA
ORGANISM: H. sapiens
S-09-144-367-29

Query Match 1.1%; Score 13.2; DB 1; Length 18;
Best Local Similarity 83.3%; Pred. No. 2.1e+02;
Matches 15; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 414 CAAGAATCAGTGAAGATG 431
||||||| ||| ||||| |
Db 1 CAAGAAACAGAGAAGAGG 18

ESULT 182
S-09-475-947A-260
Sequence 260, Application US/09475947A
Patent No. 6472154
GENERAL INFORMATION:
APPLICANT: Garner, Harold R.
APPLICANT: Wren, Jonathan D.
APPLICANT: Minna, John D.
TITLE OF INVENTION: Polymorphic Repeats in Human Genes
FILE REFERENCE: UTSD0667
CURRENT APPLICATION NUMBER: US/09/475,947A
CURRENT FILING DATE: 1999-12-31
NUMBER OF SEQ ID NOS: 346
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 260
LENGTH: 18
TYPE: DNA
ORGANISM: human
S-09-475-947A-260

Query Match 1.1%; Score 13.2; DB 1; Length 18;
Best Local Similarity 83.3%; Pred. No. 2.1e+02;
Matches 15; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 819 CTGGAAATCCTGGATTTT 836
|||||| | ||||||||
Db 1 CTGGAAGACATGGATTTT 18

ESULT 183
S-09-422-978-5436/c
Sequence 5436, Application US/09422978
Patent No. 6537751
GENERAL INFORMATION:
APPLICANT: Cohen, Daniel
APPLICANT: Blumenfeld, Marta
APPLICANT: Chumakov, Ilya
TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
FILE REFERENCE: GENSET.020CP1
CURRENT APPLICATION NUMBER: US/09/422,978
CURRENT FILING DATE: 1999-10-20
EARLIER APPLICATION NUMBER: US 09/298,850
EARLIER FILING DATE: 1999-04-21
EARLIER APPLICATION NUMBER: US 60/109,732
EARLIER FILING DATE: 1998-11-23
EARLIER APPLICATION NUMBER: US 60/082,614
EARLIER FILING DATE: 1998-04-21
; NUMBER OF SEQ ID NOS: 11796
; SEQ ID NO 5436
; LENGTH: 18
; TYPE: DNA
; ORGANISM: Homo Sapiens
; FEATURE:
; NAME/KEY: primer_bind
; LOCATION: 1..18
; OTHER INFORMATION: upstream amplification primer 99-25716 for SEQ 1502,
US-09-422-978-5436

Query Match 1.1%; Score 13.2; DB 1; Length 18;
Best Local Similarity 83.3%; Pred. No. 2.1e+02;
Matches 15; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 421 CAGTGAAGATGCCAGTGA 438
|||||||| || |||| |
Db 18 CAGTGAAGGTGTCAGTTA 1

RESULT 184
US-09-068-506-71
; Sequence 71, Application US/09068506A
; Patent No. 6569618
; GENERAL INFORMATION:
; APPLICANT: YASUE, Hirofumi
; APPLICANT: YOSHIMURA, Kumamoto
; TITLE OF INVENTION: DIAGNOSIS OF DISEASES ASSOCIATED WITH CORONARY
; TITLE OF INVENTION: TWITCHING
; FILE REFERENCE: 0032-245P
; CURRENT APPLICATION NUMBER: US/09/068,506A
; CURRENT FILING DATE: 1998-07-10
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 71
; LENGTH: 18
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Primers
US-09-068-506-71

Query Match 1.1%; Score 13.2; DB 1; Length 18;
Best Local Similarity 83.3%; Pred. No. 2.1e+02;
Matches 15; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1355 GTGTTGGTAGTGCTGTGT 1372
| ||| ||||| ||||||
Db 1 GGGTTTGTAGTTCTGTGT 18

RESULT 185
PCT-US95-08604-92/c
; Sequence 92, Application PC/TUS9508604
; GENERAL INFORMATION:
; APPLICANT: Visible Genetics Inc.
; APPLICANT: HSC Reasearch and Development Limitied Partnership
; APPLICANT: Gallie, Brenda L.
; APPLICANT: Dunn, James M.
; APPLICANT: Stevens, John K.
; TITLE OF INVENTION: Method, Reagents and Kit for Diagnosis
; TITLE OF INVENTION: and Targeted Screening for Retinoblastoma
; NUMBER OF SEQUENCES: 125
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Oppedahl & Larson
; STREET: 1992 Commerce Street, Suite 309
; CITY: Yorktown Heights
; STATE: NY
; COUNTRY: USA
; ZIP: 10598-4412
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Mb

```
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  DOS 5.0
;       SOFTWARE:  Word Perfect
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US95/08604
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/271,942
;       FILING DATE:  08-JUL-1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Marina T. Larson
;       REGISTRATION NUMBER:  32,038
;       REFERENCE/DOCKET NUMBER:  VGEN.P-003-WO
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (914) 245-3252
;       TELEFAX:  (914) 962-4330
;       TELEX:
;   INFORMATION FOR SEQ ID NO:  92:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  18
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  genomic DNA
;     HYPOTHETICAL:  no
;     ANTI-SENSE:  no
;     FRAGMENT TYPE:  internal
;     ORIGINAL SOURCE:
;       ORGANISM:  human
;     FEATURE:
;       NAME/KEY:  primer for exon 11 of human RB1 gene
PCT-US95-08604-92

  Query Match             1.1%;  Score 13.2;  DB 1;  Length 18;
  Best Local Similarity   83.3%;  Pred. No. 2.1e+02;
  Matches   15;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1566 TTTTTACTGTTTCTGATT 1583
              ||| || |||||| ||||
Db         18 TTTATAGTGTTTCAGATT 1


RESULT 186
US-08-435-605A-48/c
; Sequence 48, Application US/08435605A
; Patent No. 5874287
;  GENERAL INFORMATION:
;    APPLICANT:  Burnette, W. Neal
;    APPLICANT:  Kaslow, Harvey R.
;    TITLE OF INVENTION:  RECOMBINANT DNA-DERIVED CHOLERA TOXIN
;    TITLE OF INVENTION:  SUBUNIT ANALOGS
;    NUMBER OF SEQUENCES:  57
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Amgen Inc.
;      STREET:  1840 De Havilland Drive
;      CITY:  Thousand Oaks
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  91320-1789
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,605A
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mazza, Richard J.
;      REGISTRATION NUMBER:  27,657
;      REFERENCE/DOCKET NUMBER:  A-196B
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  14 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  other nucleic acid
;      DESCRIPTION:  /desc = "oligonucleotide"
US-08-435-605A-48

  Query Match             1.0%;  Score 13;  DB 1;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1412 AAAACTCCACAGT 1424
              |||||||||||||
Db         13 AAAACTCCACAGT 1


RESULT 187
US-08-882-649A-9/c
; Sequence 9, Application US/08882649A
; Patent No. 6344316
;  GENERAL INFORMATION:
;       APPLICANT: Lockhart, David J.
;                  Chee, Mark
;                  Gunderson, Kevin
;                  Chaoqiang, Lai
;                  Wodicka, Lisa
;                  Cronin, Maureen T.
;                  Lee, Danny
;                  Tran, Huu M.
;                  Matsuzaki, Hajime
;                  McGall, Glenn H.
;       TITLE OF INVENTION: NUCLEIC ACID ANALYSIS TECHNIQUES
;       NUMBER OF SEQUENCES: 32
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Joe Liebeschuetz
;            STREET: Two Embarcadero Center, Bighth Floor
;            CITY: San Francisco
;            STATE: CA
;            COUNTRY: USA
;            ZIP: 94111-3834
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.30
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/08/882,649A
;            FILING DATE: 25-Jun-1997
;            CLASSIFICATION: 435-006.000
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: US 60/010,471
;            FILING DATE: 23-JAN-1996
;            APPLICATION NUMBER: US 60/035,170
;            FILING DATE: 09-JAN-1997
;            APPLICATION NUMBER: PCT/US97/01603
;            FILING DATE: 22-JAN-1997
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Liebeschuetz, Joe
;            REGISTRATION NUMBER: 37,505
;            REFERENCE/DOCKET NUMBER: 018547-019410US
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: (415) 576-0200
;            TELEFAX: (415) 576-0300
;   INFORMATION FOR SEQ ID NO: 9:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 14 base pairs
;            TYPE: nucleic acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       MOLECULE TYPE: DNA (genomic)
```

```
       HYPOTHETICAL: YES
                     (ix)  Features:
       SEQUENCE DESCRIPTION: SEQ ID NO: 9:
S-08-882-649A-9

 Query Match              1.0%;  Score 13;  DB 1;  Length 14;
 Best Local Similarity  100.0%;  Pred. No. 1.2e+02;
 Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

       1143 TTTATTTTATTTT 1155
            |||||||||||||
         13 TTTATTTTATTTT 1


SULT 188
-08-334-847-510/c
 Sequence 510, Application US/08334847
 Patent No. 5693532
  GENERAL INFORMATION:
    APPLICANT:  McSwiggen, James
    APPLICANT:  Draper, Kenneth
    APPLICANT:  Pavco, Pam
    APPLICANT:  Woolf, Tod
    TITLE OF INVENTION:  METHOD AND REAGENT FOR
    TITLE OF INVENTION:  INHIBITING RESPIRATORY
    TITLE OF INVENTION:  SYNCYTIAL VIRUS
    NUMBER OF SEQUENCES:  909
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/334,847
      FILING DATE:  No. 5693532ember 4, 1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/032
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  510:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
-08-334-847-510

Query Match              1.0%;  Score 13;  DB 1;  Length 15;
Best Local Similarity  100.0%;  Pred. No. 1.4e+02;
Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

       525 ATTTGAATTTCAG 537
           |||||||||||||
        13 ATTTGAATTTCAG 1


SULT 189
```

```
US-08-311-486C-188
; Sequence 188, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  188:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-188

  Query Match              1.0%;  Score 13;  DB 1;  Length 15;
  Best Local Similarity   30.8%;  Pred. No. 1.4e+02;
  Matches    4;  Conservative    9;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1038 TATTTATTATTTA 1050
              :|:::|::|:::|
Db          3 UAUUUAUUAUUUA 15


RESULT 190
US-08-311-486C-196
; Sequence 196, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
```

```
    APPLICANT:  James McSwiggen
    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
    TITLE OF INVENTION:  DISEASES OR CONDITIONS
    TITLE OF INVENTION:  RELATED TO LEVELS OF
    TITLE OF INVENTION:  TNF-`
    NUMBER OF SEQUENCES:  1157
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  196:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
IS-08-311-486C-196

  Query Match             1.0%;  Score 13;  DB 1;  Length 15;
  Best Local Similarity   30.8%;  Pred. No. 1.4e+02;
  Matches    4;  Conservative    9;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1038 TATTTATTATTTA 1050
              :|:::|::|:::|
Db          3 UAUUUAUUAUUUA 15


RESULT 191
IS-08-311-486C-705
  Sequence 705, Application US/08311486C
  Patent No. 5811300
  GENERAL INFORMATION:
    APPLICANT:  Sean Sullivan
    APPLICANT:  Kenneth Draper
    APPLICANT:  Kevin Kisich
    APPLICANT:  Dan T. Stinchcomb
    APPLICANT:  James McSwiggen
    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
    TITLE OF INVENTION:  DISEASES OR CONDITIONS
    TITLE OF INVENTION:  RELATED TO LEVELS OF
    TITLE OF INVENTION:  TNF-`
    NUMBER OF SEQUENCES:  1157
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  705:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
US-08-311-486C-705

  Query Match             1.0%;  Score 13;  DB 1;  Length 15;
  Best Local Similarity   30.8%;  Pred. No. 1.4e+02;
  Matches    4;  Conservative    9;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1038 TATTTATTATTTA 1050
              :|:::|::|:::|
Db          3 UAUUUAUUAUUUA 15


RESULT 192
US-08-311-486C-720
; Sequence 720, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-`
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
```

```
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  720:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
3-08-311-486C-720

 Query Match             1.0%;  Score 13;  DB 1;  Length 15;
 Best Local Similarity   30.8%;  Pred. No. 1.4e+02;
 Matches    4;  Conservative    9;  Mismatches    0;  Indels    0;  Gaps    0;

Y       1038 TATTTATTATTTA 1050
             :|:::|::|:::|
D          3 UAUUUAUUAUUUA 15


ESULT 193
S-07-977-284A-168/c
 Sequence 168, Application US/07977284A
 Patent No. 5558988
  GENERAL INFORMATION:
    APPLICANT:  Prockop, Darwin J.
    APPLICANT:  Ala-Kokko, Leena
    APPLICANT:  Williams, Charlene J.
    APPLICANT:  Ritvaniemi, Pertti
    APPLICANT:  Baldwin, Clinton
    APPLICANT:  Hopkinson, Ian
    APPLICANT:  Ahmad, Nilofer Nina
    TITLE OF INVENTION:  METHODS OF DETECTING A GENETIC
    TITLE OF INVENTION:  PREDISPOSITION FOR OSTEOARTHRITIS
    NUMBER OF SEQUENCES:  261
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Woodcock, Washburn, Kurtz, Mackiewicz & No. 5558988ris
      STREET:  One Liberty Place, 46th floor
      CITY:  Philadelphia
      STATE:  PA
      COUNTRY:  USA
      ZIP:  19103
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  WordPerfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/07/977,284A
      FILING DATE:  13-NOV-1992
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
;       FILING DATE:
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  DeLuca, Mark
;       REGISTRATION NUMBER:  33,229
;       REFERENCE/DOCKET NUMBER:  TJU-0697
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (215) 568-3100
;       TELEFAX:  (215) 568-3439
;   INFORMATION FOR SEQ ID NO:  168:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  17
;       TYPE:  NUCLEIC ACID
;       STRANDEDNESS:  SINGLE
;       TOPOLOGY:  LINEAR
;     ANTI-SENSE:  NO
US-07-977-284A-168

  Query Match             1.0%;  Score 13;  DB 1;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 2e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        744 TTTGCTAGAATGT 756
              |||||||||||||
Db         15 TTTGCTAGAATGT 3


RESULT 194
US-08-249-037C-17
; Sequence 17, Application US/08249037C
; Patent No. 5928917
;  GENERAL INFORMATION:
;    APPLICANT:  Kilburn, Douglas G.
;    APPLICANT:  Miller, Robert C.
;    APPLICANT:  Warren, Richard A.J.
;    APPLICANT:  Gilkes, Neil R.
;    TITLE OF INVENTION:  Polysaccharide binding fusion proteins
;    TITLE OF INVENTION:  and conjugates
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Rae-Venter Law Group, P.C.
;      STREET:  P.O.Box 60039
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  U.S.
;      ZIP:  94306
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/249,037C
;      FILING DATE:  24-MAY-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/865,095
;      FILING DATE:  08-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,987
;      FILING DATE:  25-OCT-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/216,794
;      FILING DATE:  08-JUL-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kung, Viola T.
;      REGISTRATION NUMBER:  41,131
;      REFERENCE/DOCKET NUMBER:  CBDT.002.04US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (650)328-4400
;      TELEFAX:  (650)328-4477
;  INFORMATION FOR SEQ ID NO:  17:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
```

```
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA (genomic)
US-08-249-037C-17

  Query Match             1.0%;  Score 13;  DB 1;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 2e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1084 AATTTGGAAAAAT 1096
              |||||||||||||
Db          1 AATTTGGAAAAAT 13


RESULT 195
US-08-256-426B-168/c
  Sequence 168, Application US/08256426B
  Patent No. 5948611
   GENERAL INFORMATION:
     APPLICANT:  Prockop, Darwin J.
     APPLICANT:  Ala-Kokko, Leena
     APPLICANT:  Williams, Charlene J.
     APPLICANT:  Ritvaniemi, Pertti
     APPLICANT:  Baldwin, Clinton
     APPLICANT:  Hopkinson, Ian
     APPLICANT:  Ahmad, Nilofer Nina
     TITLE OF INVENTION:  Methods of Detecting A Genetic
     NUMBER OF SEQUENCES:  293
     CORRESPONDENCE ADDRESS:
       ADDRESSEE:  Woodcock Washburn Kurtz Mackiewicz & No. 5948611ris
       STREET:  One Liberty Place - 46th Floor
       CITY:  Philadelphia
       STATE:  PA
       COUNTRY:  USA
       ZIP:  19103
     COMPUTER READABLE FORM:
       MEDIUM TYPE:  DISKETTE, 3.5 INCH
       COMPUTER:  IBM Compatible
       OPERATING SYSTEM:  Windows 3.1
       SOFTWARE:  WORDPERFECT 6.1
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER:  US/08/256,426B
       FILING DATE:  03-FEB-1995
       CLASSIFICATION:  435
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER:  PCT/US93/10964
       FILING DATE:  12-NOV-1993
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER:  US 07/977,284
       FILING DATE:  13-NOV-1992
     ATTORNEY/AGENT INFORMATION:
       NAME:  Mark DeLuca
       REGISTRATION NUMBER:  33,229
       REFERENCE/DOCKET NUMBER:  TJU-1082
     TELECOMMUNICATION INFORMATION:
       TELEPHONE:  (215) 568-3100
       TELEFAX:  (215) 568-3439
   INFORMATION FOR SEQ ID NO:  168:
     SEQUENCE CHARACTERISTICS:
       LENGTH:  17
       TYPE:  NUCLEIC ACID
       STRANDEDNESS:  SINGLE
       TOPOLOGY:  LINEAR
     ANTI-SENSE:  NO
US-08-256-426B-168

  Query Match             1.0%;  Score 13;  DB 1;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 2e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        744 TTTGCTAGAATGT 756
              |||||||||||||
Db         15 TTTGCTAGAATGT 3


RESULT 196
US-08-788-622B-17
; Sequence 17, Application US/08788622B
; Patent No. 5962289
;  GENERAL INFORMATION:
;    APPLICANT:  Kilburn, Douglas G.
;    APPLICANT:  Miller, Robert C.
;    APPLICANT:  Warren, Richard A.J.
;    APPLICANT:  Gilkes, Neil R.
;    TITLE OF INVENTION:  Polysaccharide binding fusion proteins
;    TITLE OF INVENTION:  and conjugates
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Rae-Venter Law Group, P.C.
;      STREET:  P.O.Box 60039
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  U.S.
;      ZIP:  94306
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/788,622B
;      FILING DATE:  January 23, 1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/249,037
;      FILING DATE:  24-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/865,095
;      FILING DATE:  08-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,987
;      FILING DATE:  25-OCT-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/216,794
;      FILING DATE:  08-JUL-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kung, Viola T.
;      REGISTRATION NUMBER:  41,131
;      REFERENCE/DOCKET NUMBER:  CBDT.002.06US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (650)328-4400
;      TELEFAX:  (650)328-4477
;  INFORMATION FOR SEQ ID NO:  17:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-788-622B-17

  Query Match             1.0%;  Score 13;  DB 1;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 2e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1084 AATTTGGAAAAAT 1096
              |||||||||||||
Db          1 AATTTGGAAAAAT 13


RESULT 197
US-08-985-162-514
; Sequence 514, Application US/08985162
; Patent No. 6057156
;  GENERAL INFORMATION:
;    APPLICANT:  Akhtar, Saghir
```

```
    APPLICANT:  Pell, Patricia
    APPLICANT:  McSwiggen, James
    TITLE OF INVENTION:  ENZYMATIC NUCLEIC ACID TREATMENT
    TITLE OF INVENTION:  OF DISEASES OR CONDITIONS RELATED
    TITLE OF INVENTION:  TO LEVELS OF EPIDERMAL GROWTH
    TITLE OF INVENTION:  FACTOR RECEPTORS
    NUMBER OF SEQUENCES:  1877
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  FastSEQ for Windows 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/985,162
      FILING DATE:  04 December 1997
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  60/036,476
      FILING DATE:  31 January 1997
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  230/107
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213)  955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  514:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
3-08-985-162-514

 Query Match             1.0%;  Score 13;  DB 1;  Length 17;
 Best Local Similarity   38.5%;  Pred. No. 2e+02;
 Matches    5;  Conservative    8;  Mismatches    0;  Indels    0;  Gaps    0;

,        550 AGTTTTTCATTGT 562
             ||:::::||::|:
)          5 AGUUUUUCAUUGU 17


3SULT 198
3-08-985-162-515
 Sequence 515, Application US/08985162
 Patent No. 6057156
  GENERAL INFORMATION:
    APPLICANT:  Akhtar, Saghir
    APPLICANT:  Fell, Patricia
    APPLICANT:  McSwiggen, James
    TITLE OF INVENTION:  ENZYMATIC NUCLEIC ACID TREATMENT
    TITLE OF INVENTION:  OF DISEASES OR CONDITIONS RELATED
    TITLE OF INVENTION:  TO LEVELS OF EPIDERMAL GROWTH
    TITLE OF INVENTION:  FACTOR RECEPTORS
    NUMBER OF SEQUENCES:  1877
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  FastSEQ for Windows 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/985,162
      FILING DATE:  04 December 1997
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  60/036,476
      FILING DATE:  31 January 1997
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  230/107
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213)  955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  515:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
US-08-985-162-515

  Query Match             1.0%;  Score 13;  DB 1;  Length 17;
  Best Local Similarity   38.5%;  Pred. No. 2e+02;
  Matches    5;  Conservative    8;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         550 AGTTTTTCATTGT 562
               ||:::::||::|:
Db           4 AGUUUUUCAUUGU 16


RESULT 199
US-08-985-162-516
; Sequence 516, Application US/08985162
; Patent No. 6057156
;  GENERAL INFORMATION:
;    APPLICANT:  Akhtar, Saghir
;    APPLICANT:  Fell, Patricia
;    APPLICANT:  McSwiggen, James
;    TITLE OF INVENTION:  ENZYMATIC NUCLEIC ACID TREATMENT
;    TITLE OF INVENTION:  OF DISEASES OR CONDITIONS RELATED
;    TITLE OF INVENTION:  TO LEVELS OF EPIDERMAL GROWTH
;    TITLE OF INVENTION:  FACTOR RECEPTORS
;    NUMBER OF SEQUENCES:  1877
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  FastSEQ for Windows 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/985,162
;      FILING DATE:  04 December 1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/036,476
;      FILING DATE:  31 January 1997
```

```
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  230/107
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213)  955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  516:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
JS-08-985-162-516

  Query Match              1.0%;  Score 13;  DB 1;  Length 17;
  Best Local Similarity   38.5%;  Pred. No. 2e+02;
  Matches    5;  Conservative    8;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        550 AGTTTTTCATTGT 562
              ||:::::||::|:
Db          3 AGUUUUUCAUUGU 15


RESULT 200
JS-08-985-162-517
; Sequence 517, Application US/08985162
; Patent No. 6057156
;  GENERAL INFORMATION:
;    APPLICANT:  Akhtar, Saghir
;    APPLICANT:  Fell, Patricia
;    APPLICANT:  McSwiggen, James
;    TITLE OF INVENTION:  ENZYMATIC NUCLEIC ACID TREATMENT
;    TITLE OF INVENTION:  OF DISEASES OR CONDITIONS RELATED
;    TITLE OF INVENTION:  TO LEVELS OF EPIDERMAL GROWTH
;    TITLE OF INVENTION:  FACTOR RECEPTORS
;    NUMBER OF SEQUENCES:  1877
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  FastSEQ for Windows 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/985,162
;      FILING DATE:  04 December 1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/036,476
;      FILING DATE:  31 January 1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  230/107
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213)  955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  517:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-985-162-517

  Query Match              1.0%;  Score 13;  DB 1;  Length 17;
  Best Local Similarity   38.5%;  Pred. No. 2e+02;
  Matches    5;  Conservative    8;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        550 AGTTTTTCATTGT 562
              ||:::::||::|:
Db          2 AGUUUUUCAUUGU 14


RESULT 201
US-08-788-621B-17
; Sequence 17, Application US/08788621B
; Patent No. 6124117
;  GENERAL INFORMATION:
;    APPLICANT:  Kilburn, Douglas G.
;    APPLICANT:  Miller, Robert C.
;    APPLICANT:  Warren, Richard A.J.
;    APPLICANT:  Gilkes, Neil R.
;    TITLE OF INVENTION:  Polysaccharide binding fusion proteins
;    TITLE OF INVENTION:  and conjugates
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Rae-Venter Law Group, P.C.
;      STREET:  P.O.Box 60039
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  U.S.
;      ZIP:  94306
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/788,621B
;      FILING DATE:  January 23, 1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/249,037
;      FILING DATE:  24-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/865,095
;      FILING DATE:  08-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/603,987
;      FILING DATE:  25-OCT-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/216,794
;      FILING DATE:  08-JUL-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kung, Viola T.
;      REGISTRATION NUMBER:  41,131
;      REFERENCE/DOCKET NUMBER:  CBDT.002.05US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (650)328-4400
;      TELEFAX:  (650)328-4477
;  INFORMATION FOR SEQ ID NO:  17:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  DNA (genomic)
US-08-788-621B-17

  Query Match              1.0%;  Score 13;  DB 1;  Length 17;
  Best Local Similarity  100.0%;  Pred. No. 2e+02;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1084 AATTTGGAAAAAT 1096
              |||||||||||||
Db          1 AATTTGGAAAAAT 13
```

```
ESULT 202
3-09-067-773-28/c
 Sequence 28, Application US/09067773
 Patent No. 5976805
  GENERAL INFORMATION:
    APPLICANT:  You, Qimin
    TITLE OF INVENTION:  A Neisseria gonorrhoeae Specific DNA
    TITLE OF INVENTION:  Fragment -- GC3
    NUMBER OF SEQUENCES:  33
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Becton Dickinson and Company
      STREET:  1 Becton Drive
      CITY:  Franklin Lakes
      STATE:  New Jersey
      COUNTRY:  USA
      ZIP:  07417-6800
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/09/067,773
      FILING DATE:
      CLASSIFICATION:
    ATTORNEY/AGENT INFORMATION:
      NAME:  Highet, David W.
      REFERENCE/DOCKET NUMBER:  P-4088
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  201-847-6800
      TELEFAX:  201-848-9228
   INFORMATION FOR SEQ ID NO:  28:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  16 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  other nucleic acid
3-09-067-773-28

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 16;
 Best Local Similarity   87.5%;  Pred. No. 1.9e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

/        756 TGATATTTGAAGCATC 771
             ||| |||||| |||||
>         16 TGACATTTGACGCATC 1


ESULT 203
3-08-373-124A-974/c
 Sequence 974, Application US/08373124A
 Patent No. 5646042
  GENERAL INFORMATION:
    APPLICANT:  Stinchcomb, Dan T.
    APPLICANT:  Draper, Kenneth
    APPLICANT:  McSwiggen, James
    APPLICANT:  Jarvis, Thale
    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
    TITLE OF INVENTION:  CANCER USING RIBOZYMES
    NUMBER OF SEQUENCES:  2627
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071
    COMPUTER READABLE FORM:
;       MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;       MEDIUM TYPE:  storage
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  IBM P.C. DOS 5.0
;       SOFTWARE:  Word Perfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/373,124A
;       FILING DATE:  January 13, 1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/245,466
;       FILING DATE:  May 18, 1994
;       APPLICATION NUMBER:  08/192,943
;       FILING DATE:  February 7, 1994
;       APPLICATION NUMBER:  07/987,132
;       FILING DATE:  December 7, 1992
;       APPLICATION NUMBER:  07/936,422
;       FILING DATE:  August 26, 1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  209/035
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;   INFORMATION FOR SEQ ID NO:  974:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  17 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-373-124A-974

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1613 ATTTAAAATATAATTT 1628
              | | ||||||||||||||
Db         17 AATAAAAATATAATTT 2


RESULT 204
US-08-373-124A-2037
; Sequence 2037, Application US/08373124A
; Patent No. 5646042
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
;    NUMBER OF SEQUENCES:  2627
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/373,124A
;      FILING DATE:  January 13, 1995
;    PRIOR APPLICATION DATA:
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      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
      APPLICATION NUMBER:  08/192,943
      FILING DATE:  February 7, 1994
      APPLICATION NUMBER:  07/987,132
      FILING DATE:  December 7, 1992
      APPLICATION NUMBER:  07/936,422
      FILING DATE:  August 26, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/035
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  2037:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
S-08-373-124A-2037

 Query Match              1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   50.0%;  Pred. No. 2.3e+02;
 Matches    8;  Conservative    6;  Mismatches    2;  Indels    0;  Gaps    0;

y       1460 TATTATGTACAAATAG 1475
             :|::|:|:|  ||:||
b          1 UAUUAUGUAUGAAUAG 16


ESULT 205
S-08-373-124A-2055/c
 Sequence 2055, Application US/08373124A
 Patent No. 5646042
  GENERAL INFORMATION:
    APPLICANT:  Stinchcomb, Dan T.
    APPLICANT:  Draper, Kenneth
    APPLICANT:  McSwiggen, James
    APPLICANT:  Jarvis, Thale
    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
    TITLE OF INVENTION:  CANCER USING RIBOZYMES
    NUMBER OF SEQUENCES:  2627
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/373,124A
      FILING DATE:  January 13, 1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
      APPLICATION NUMBER:  08/192,943
      FILING DATE:  February 7, 1994
      APPLICATION NUMBER:  07/987,132
      FILING DATE:  December 7, 1992
      APPLICATION NUMBER:  07/936,422
      FILING DATE:  August 26, 1992
    ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  209/035
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;   INFORMATION FOR SEQ ID NO:  2055:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  17 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-373-124A-2055

  Query Match              1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1613 ATTTAAAATATAATTT 1628
              | | ||||||||||||
Db         17 AATAAAAATATAATTT 2


RESULT 206
US-08-373-124A-2153
; Sequence 2153, Application US/08373124A
; Patent No. 5646042
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
;    NUMBER OF SEQUENCES:  2627
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/373,124A
;      FILING DATE:  January 13, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/245,466
;      FILING DATE:  May 18, 1994
;      APPLICATION NUMBER:  08/192,943
;      FILING DATE:  February 7, 1994
;      APPLICATION NUMBER:  07/987,132
;      FILING DATE:  December 7, 1992
;      APPLICATION NUMBER:  07/936,422
;      FILING DATE:  August 26, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/035
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  2153:
;    SEQUENCE CHARACTERISTICS:
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LENGTH: 17 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
3-08-373-124A-2153

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 18.8%; Pred. No. 2.3e+02;
Matches 3; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

Qy 1040 TTTATTATTTATGTAT 1055
:::|:: :::|: :|:
Db 2 UUUAUUUUUUAUAUAU 17

ESULT 207
3-08-373-124A-2155
Sequence 2155, Application US/08373124A
Patent No. 5646042
GENERAL INFORMATION:
APPLICANT: Stinchcomb, Dan T.
APPLICANT: Draper, Kenneth
APPLICANT: McSwiggen, James
APPLICANT: Jarvis, Thale
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR
TITLE OF INVENTION: TREATMENT OF RESTENOSIS AND
TITLE OF INVENTION: CANCER USING RIBOZYMES
NUMBER OF SEQUENCES: 2627
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/373,124A
FILING DATE: January 13, 1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/245,466
FILING DATE: May 18, 1994
APPLICATION NUMBER: 08/192,943
FILING DATE: February 7, 1994
APPLICATION NUMBER: 07/987,132
FILING DATE: December 7, 1992
APPLICATION NUMBER: 07/936,422
FILING DATE: August 26, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 209/035
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 2155:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
:-08-373-124A-2155

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 18.8%; Pred. No. 2.3e+02;
Matches 3; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

Qy 1040 TTTATTATTTATGTAT 1055
:::|:: :::|: :|:
Db 1 UUUAUUUUUUAUAUAU 16

RESULT 208
US-08-435-628-974/c
; Sequence 974, Application US/08435628
; Patent No. 5817796
; GENERAL INFORMATION:
; APPLICANT: Stinchcomb, Dan T.
; APPLICANT: Draper, Kenneth
; APPLICANT: McSwiggen, James
; APPLICANT: Jarvis, Thale
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR
; TITLE OF INVENTION: TREATMENT OF RESTENOSIS AND
; TITLE OF INVENTION: CANCER USING RIBOZYMES
; NUMBER OF SEQUENCES: 2627
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Lyon & Lyon
; STREET: 633 West Fifth Street
; STREET: Suite 4700
; CITY: Los Angeles
; STATE: California
; COUNTRY: U.S.A.
; ZIP: 90071
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; MEDIUM TYPE: storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: IBM P.C. DOS 5.0
; SOFTWARE: Word Perfect 5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/435,628
; FILING DATE: 05-MAY-1995
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/373,124
; FILING DATE: January 13, 1995
; APPLICATION NUMBER: 08/245,466
; FILING DATE: May 18, 1994
; APPLICATION NUMBER: 08/192,943
; FILING DATE: February 7, 1994
; APPLICATION NUMBER: 07/987,132
; FILING DATE: December 7, 1992
; APPLICATION NUMBER: 07/936,422
; FILING DATE: August 26, 1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Warburg, Richard
; REGISTRATION NUMBER: 32,327
; REFERENCE/DOCKET NUMBER: 209/035
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
; INFORMATION FOR SEQ ID NO: 974:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 17 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-435-628-974

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 2.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1613 ATTTAAAATATAATTT 1628
| | ||||||||||||||
Db 17 AATAAAAATATAATTT 2

```
ESULT 209
S-08-435-628-2037
 Sequence 2037, Application US/08435628
 Patent No. 5817796
  GENERAL INFORMATION:
    APPLICANT:  Stinchcomb, Dan T.
    APPLICANT:  Draper, Kenneth
    APPLICANT:  McSwiggen, James
    APPLICANT:  Jarvis, Thale
    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
    TITLE OF INVENTION:  CANCER USING RIBOZYMES
    NUMBER OF SEQUENCES:  2627
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/435,628
      FILING DATE:  05-MAY-1995
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/373,124
      FILING DATE:  January 13, 1995
      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
      APPLICATION NUMBER:  08/192,943
      FILING DATE:  February 7, 1994
      APPLICATION NUMBER:  07/987,132
      FILING DATE:  December 7, 1992
      APPLICATION NUMBER:  07/936,422
      FILING DATE:  August 26, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/035
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  2037:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
S-08-435-628-2037

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   50.0%;  Pred. No. 2.3e+02;
 Matches    8;  Conservative    6;  Mismatches    2;  Indels    0;  Gaps    0;

y       1460 TATTATGTACAAATAG 1475
             :|::|:|:|  ||:||
b          1 UAUUAUGUAUGAAUAG 16


ESULT 210
S-08-435-628-2055/c
 Sequence 2055, Application US/08435628
 Patent No. 5817796
  GENERAL INFORMATION:
    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
;    NUMBER OF SEQUENCES:  2627
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/435,628
;      FILING DATE:  05-MAY-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/373,124
;      FILING DATE:  January 13, 1995
;      APPLICATION NUMBER:  08/245,466
;      FILING DATE:  May 18, 1994
;      APPLICATION NUMBER:  08/192,943
;      FILING DATE:  February 7, 1994
;      APPLICATION NUMBER:  07/987,132
;      FILING DATE:  December 7, 1992
;      APPLICATION NUMBER:  07/936,422
;      FILING DATE:  August 26, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/035
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  2055:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-435-628-2055

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1613 ATTTAAAATATAATTT 1628
              | | ||||||||||||
Db         17 AATAAAAATATAATTT 2


RESULT 211
US-08-435-628-2153
; Sequence 2153, Application US/08435628
; Patent No. 5817796
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Jarvis, Thale
;    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
;    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
;    TITLE OF INVENTION:  CANCER USING RIBOZYMES
```

```
    NUMBER OF SEQUENCES:  2627
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/435,628
      FILING DATE:  05-MAY-1995
      CLASSIFICATION:  514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/373,124
      FILING DATE:  January 13, 1995
      APPLICATION NUMBER:  08/245,466
      FILING DATE:  May 18, 1994
      APPLICATION NUMBER:  08/192,943
      FILING DATE:  February 7, 1994
      APPLICATION NUMBER:  07/987,132
      FILING DATE:  December 7, 1992
      APPLICATION NUMBER:  07/936,422
      FILING DATE:  August 26, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/035
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  2153:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
-08-435-628-2153

 Query Match              1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   18.8%;  Pred. No. 2.3e+02;
 Matches    3;  Conservative   11;  Mismatches    2;  Indels    0;  Gaps    0;

       1040 TTTATTATTTATGTAT 1055
            :::|:: :::|: :|:
          2 UUUAUUUUUUAUAUAU 17


SULT 212
-08-435-628-2155
 Sequence 2155, Application US/08435628
 Patent No. 5817796
  GENERAL INFORMATION:
    APPLICANT:  Stinchcomb, Dan T.
    APPLICANT:  Draper, Kenneth
    APPLICANT:  McSwiggen, James
    APPLICANT:  Jarvis, Thale
    TITLE OF INVENTION:  METHODS AND COMPOSITIONS FOR
    TITLE OF INVENTION:  TREATMENT OF RESTENOSIS AND
    TITLE OF INVENTION:  CANCER USING RIBOZYMES
    NUMBER OF SEQUENCES:  2627
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
;     STATE:  California
;     COUNTRY:  U.S.A.
;     ZIP:  90071
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;     MEDIUM TYPE:  storage
;     COMPUTER:  IBM Compatible
;     OPERATING SYSTEM:  IBM P.C. DOS 5.0
;     SOFTWARE:  Word Perfect 5.1
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER:  US/08/435,628
;     FILING DATE:  05-MAY-1995
;     CLASSIFICATION:  514
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  08/373,124
;     FILING DATE:  January 13, 1995
;     APPLICATION NUMBER:  08/245,466
;     FILING DATE:  May 18, 1994
;     APPLICATION NUMBER:  08/192,943
;     FILING DATE:  February 7, 1994
;     APPLICATION NUMBER:  07/987,132
;     FILING DATE:  December 7, 1992
;     APPLICATION NUMBER:  07/936,422
;     FILING DATE:  August 26, 1992
;   ATTORNEY/AGENT INFORMATION:
;     NAME:  Warburg, Richard
;     REGISTRATION NUMBER:  32,327
;     REFERENCE/DOCKET NUMBER:  209/035
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE:  (213) 489-1600
;     TELEFAX:  (213) 955-0440
;     TELEX:  67-3510
; INFORMATION FOR SEQ ID NO:  2155:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH:  17 base pairs
;     TYPE:  nucleic acid
;     STRANDEDNESS:  single
;     TOPOLOGY:  linear
US-08-435-628-2155

  Query Match              1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   18.8%;  Pred. No. 2.3e+02;
  Matches    3;  Conservative   11;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1040 TTTATTATTTATGTAT 1055
              :::|:: :::|: :|:
Db          1 UUUAUUUUUUAUAUAU 16


RESULT 213
US-08-527-060-23/c
; Sequence 23, Application US/08527060
; Patent No. 5834440
;  GENERAL INFORMATION:
;    APPLICANT:  Goldenberg, Tsvi
;    APPLICANT:  Tritz, Richard
;    TITLE OF INVENTION:  RIBOZYME THERAPY FOR THE TREATMENT
;    TITLE OF INVENTION:  AND/OR PREVENTION OF RESTENOSIS
;    NUMBER OF SEQUENCES:  35
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  SEED and BERRY
;      STREET:  6300 Columbia Center, 701 Fifth Avenue
;      CITY:  Seattle
;      STATE:  Washington
;      COUNTRY:  USA
;      ZIP:  98104-7092
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/527,060
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```
      FILING DATE:  12-SEP-1995
      CLASSIFICATION:  514
    ATTORNEY/AGENT INFORMATION:
      NAME:  McMasters, David D.
      REGISTRATION NUMBER:  33,963
      REFERENCE/DOCKET NUMBER:  480124.402C1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (206) 622-4900
      TELEFAX:  (206) 682-6031
  INFORMATION FOR SEQ ID NO:  23:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
S-08-527-060-23

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

y       1172 TTTATTAGATAAATTT 1187
             |||| |||| ||||||
b         16 TTTAATAGAGAAATTT 1

ESULT 214
S-08-292-620A-1983
 Sequence 1983, Application US/08292620A
 Patent No. 5837542
  GENERAL INFORMATION:
    APPLICANT:  Susan Grimm
    APPLICANT:  Dan T. Stinchcomb
    APPLICANT:  James McSwiggen
    APPLICANT:  Sean Sullivan
    APPLICANT:  Kenneth G. Draper
    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
    TITLE OF INVENTION:  DISEASES OR CONDITIONS
    TITLE OF INVENTION:  RELATED TO LEVELS OF
    TITLE OF INVENTION:  INTRACELLULAR ADHESION
    TITLE OF INVENTION:  MOLECULE-1 (I-CAM-1)
    NUMBER OF SEQUENCES:  2390
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/292,620A
      FILING DATE:  August 17, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  208/149
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
;     TELEFAX:  (213) 955-0440
;     TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  1983:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-292-620A-1983

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   31.2%;  Pred. No. 2.3e+02;
  Matches    5;  Conservative    9;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTTA 1062
              :: |:|:|:::|:: |
Db          2 UUGAUGUAUUUAUUAA 17

RESULT 215
US-09-067-773-29/c
; Sequence 29, Application US/09067773
; Patent No. 5976805
;  GENERAL INFORMATION:
;    APPLICANT:  You, Qimin
;    TITLE OF INVENTION:  A Neisseria gonorrhoeae Specific DNA
;    TITLE OF INVENTION:  Fragment -- GC3
;    NUMBER OF SEQUENCES:  33
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Becton Dickinson and Company
;      STREET:  1 Becton Drive
;      CITY:  Franklin Lakes
;      STATE:  New Jersey
;      COUNTRY:  USA
;      ZIP:  07417-6800
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/067,773
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Highet, David W.
;      REFERENCE/DOCKET NUMBER:  P-4088
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  201-847-6800
;      TELEFAX:  201-848-9228
;  INFORMATION FOR SEQ ID NO:  29:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  other nucleic acid
US-09-067-773-29

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        756 TGATATTTGAAGCATC 771
              ||| |||||| ||||
Db         17 TGACATTTGACGCATC 2

RESULT 216
US-08-988-706-17/c
; Sequence 17, Application US/08988706
; Patent No. 6083698
;  GENERAL INFORMATION:
```

```
    APPLICANT:  OLSEN, Sheri J.
    APPLICANT:  ANGELLY, Tracy S.
    APPLICANT:  LAWRENCE, Tammy
    APPLICANT:  LESCALLETT, Jennifer L.
    APPLICANT:  MURPHY, Patricia D.
    APPLICANT:  ALLEN, Antonette P.
    APPLICANT:  THRUBER, Denise B.
    APPLICANT:  WHITE, Marga B.
    APPLICANT:  ZENG, Bin
    APPLICANT:  SADZEWICZ, Lisa K.
    TITLE OF INVENTION:  CANCER SUSCEPTIBILITY MUTATIONS OF BRCA1
    NUMBER OF SEQUENCES:  55
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Oncormed, Inc.
      STREET:  205 Perry Parkway
      CITY:  Gaithersburg
      STATE:  MD
      COUNTRY:  USA
      ZIP:  20877
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/988,706
      FILING DATE:
      CLASSIFICATION:
    ATTORNEY/AGENT INFORMATION:
      NAME:  TARCZA, John E.
      REGISTRATION NUMBER:  33,638
      REFERENCE/DOCKET NUMBER:  PA-0108
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  301-208-1888
      TELEFAX:  301-926-6125
  INFORMATION FOR SEQ ID NO:  17:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  17 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  other nucleic acid
      DESCRIPTION:  /desc = "PROBE"
    HYPOTHETICAL:  NO
    ANTI-SENSE:  NO
    FRAGMENT TYPE:  internal
    ORIGINAL SOURCE:
      ORGANISM:  HOMO SAPIENS
      STRAIN:  BRCA1
3-08-988-706-17

 Query Match              1.0%;  Score 12.8;  DB 1;  Length 17;
 Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

/        524 AATTTGAATTTCAGTA 539
             |||||| | |||||||
>         17 AATTTGCAATTCAGTA 2


3SULT 217
3-08-988-706-18/c
 Sequence 18, Application US/08988706
 Patent No. 6083698
  GENERAL INFORMATION:
    APPLICANT:  OLSEN, Sheri J.
    APPLICANT:  ANGELLY, Tracy S.
    APPLICANT:  LAWRENCE, Tammy
    APPLICANT:  LESCALLETT, Jennifer L.
    APPLICANT:  MURPHY, Patricia D.
    APPLICANT:  ALLEN, Antonette P.
    APPLICANT:  THRUBER, Denise B.
    APPLICANT:  WHITE, Marga B.
```

```
;    APPLICANT:  ZENG, Bin
;    APPLICANT:  SADZEWICZ, Lisa K.
;    TITLE OF INVENTION:  CANCER SUSCEPTIBILITY MUTATIONS OF BRCA1
;    NUMBER OF SEQUENCES:  55
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Oncormed, Inc.
;      STREET:  205 Perry Parkway
;      CITY:  Gaithersburg
;      STATE:  MD
;      COUNTRY:  USA
;      ZIP:  20877
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/988,706
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  TARCZA, John E.
;      REGISTRATION NUMBER:  33,638
;      REFERENCE/DOCKET NUMBER:  PA-0108
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  301-208-1888
;      TELEFAX:  301-926-6125
;  INFORMATION FOR SEQ ID NO:  18:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  other nucleic acid
;      DESCRIPTION:  /desc = "PROBE"
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:  internal
;    ORIGINAL SOURCE:
;      ORGANISM:  HOMO SAPIENS
;      STRAIN:  BRCA1
US-08-988-706-18

  Query Match              1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        524 AATTTGAATTTCAGTA 539
              |||||| | |||||||
Db         17 AATTTGCAGTTCAGTA 2


RESULT 218
US-09-071-845-1983
; Sequence 1983, Application US/09071845
; Patent No. 6132967
;  GENERAL INFORMATION:
;    APPLICANT:  Susan Grimm
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth G. Draper
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  INTRACELLULAR ADHESION
;    TITLE OF INVENTION:  MOLECULE-1 (I-CAM-1)
;    NUMBER OF SEQUENCES:  2390
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
```

```
;       STATE:  California
;       COUNTRY:  U.S.A.
;       ZIP:  90071-2066
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;       MEDIUM TYPE:  storage
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  IBM P.C. DOS 5.0
;       SOFTWARE:  Word Perfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/071,845
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/292,620
;       FILING DATE:  August 17, 1994
;       APPLICATION NUMBER:  08/008,895
;       FILING DATE:  January 19, 1993
;       APPLICATION NUMBER:  07/989,849
;       FILING DATE:  December 7, 1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard J.
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  208/149
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;   INFORMATION FOR SEQ ID NO:  1983:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  17 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-09-071-845-1983

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   31.2%;  Pred. No. 2.3e+02;
  Matches    5;  Conservative    9;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1047 TTTATGTATTTATTTA 1062
                :: |:|:|:::|:: |
Db          2 UUGAUGUAUUUAUUAA 17


RESULT 219
US-08-584-040-2166/c
; Sequence 2166, Application US/08584040
; Patent No. 6346398
;  GENERAL INFORMATION:
;    APPLICANT:  Pavco, Pamela
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Escobedo, Jaime
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  TREATMENT OF DISEASES OR
;    TITLE OF INVENTION:  CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF VASCULAR ENDOTHELIAL
;    TITLE OF INVENTION:  GROWTH FACTOR
;    NUMBER OF SEQUENCES:  8502
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/584,040
;      FILING DATE:  January 11, 1996
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/005,974
;      FILING DATE:  October 26, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/064
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  2166:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-584-040-2166

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1586 ATGGAAATATAAAAGT 1601
              ||||||| ||||| ||
Db         16 ATGGAAAGATAAAGGT 1


RESULT 220
US-08-584-040-2556/c
; Sequence 2556, Application US/08584040
; Patent No. 6346398
;  GENERAL INFORMATION:
;    APPLICANT:  Pavco, Pamela
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Escobedo, Jaime
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  TREATMENT OF DISEASES OR
;    TITLE OF INVENTION:  CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF VASCULAR ENDOTHELIAL
;    TITLE OF INVENTION:  GROWTH FACTOR
;    NUMBER OF SEQUENCES:  8502
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/584,040
;      FILING DATE:  January 11, 1996
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/005,974
;      FILING DATE:  October 26, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/064
```

TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 2556:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
S-08-584-040-2556

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 2.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1085 ATTTGGAAAAATAGAA 1100
||||||||||| | ||
Db 17 ATTTGGAAAAAAAAAA 2

ESULT 221
S-08-584-040-2557/c
Sequence 2557, Application US/08584040
Patent No. 6346398
GENERAL INFORMATION:
APPLICANT: Pavco, Pamela
APPLICANT: McSwiggen, James
APPLICANT: Stinchcomb, Dan T.
APPLICANT: Escobedo, Jaime
TITLE OF INVENTION: METHOD AND REAGENT FOR THE
TITLE OF INVENTION: TREATMENT OF DISEASES OR
TITLE OF INVENTION: CONDITIONS RELATED TO LEVELS
TITLE OF INVENTION: OF VASCULAR ENDOTHELIAL
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 8502
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/584,040
FILING DATE: January 11, 1996
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/005,974
FILING DATE: October 26, 1995
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 218/064
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 2557:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
S-08-584-040-2557

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 2.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1085 ATTTGGAAAAATAGAA 1100
||||||||||| | ||
Db 16 ATTTGGAAAAAAAAAA 1

RESULT 222
US-08-584-040-2828/c
; Sequence 2828, Application US/08584040
; Patent No. 6346398
; GENERAL INFORMATION:
; APPLICANT: Pavco, Pamela
; APPLICANT: McSwiggen, James
; APPLICANT: Stinchcomb, Dan T.
; APPLICANT: Escobedo, Jaime
; TITLE OF INVENTION: METHOD AND REAGENT FOR THE
; TITLE OF INVENTION: TREATMENT OF DISEASES OR
; TITLE OF INVENTION: CONDITIONS RELATED TO LEVELS
; TITLE OF INVENTION: OF VASCULAR ENDOTHELIAL
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 8502
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Lyon & Lyon
; STREET: 633 West Fifth Street
; STREET: Suite 4700
; CITY: Los Angeles
; STATE: California
; COUNTRY: U.S.A.
; ZIP: 90071-2066
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; MEDIUM TYPE: storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: IBM P.C. DOS 5.0
; SOFTWARE: Word Perfect 5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/584,040
; FILING DATE: January 11, 1996
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/005,974
; FILING DATE: October 26, 1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Warburg, Richard J.
; REGISTRATION NUMBER: 32,327
; REFERENCE/DOCKET NUMBER: 218/064
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
; INFORMATION FOR SEQ ID NO: 2828:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 17 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-584-040-2828

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 2.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1201 TAGATTAAACAAACAA 1216
||| | ||||||||||
Db 16 TAGGTAAAACAAACAA 1

RESULT 223
US-08-584-040-3850
; Sequence 3850, Application US/08584040

```
; Patent No. 6346398
;  GENERAL INFORMATION:
;    APPLICANT:  Pavco, Pamela
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Escobedo, Jaime
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  TREATMENT OF DISEASES OR
;    TITLE OF INVENTION:  CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF VASCULAR ENDOTHELIAL
;    TITLE OF INVENTION:  GROWTH FACTOR
;    NUMBER OF SEQUENCES:  8502
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/584,040
;      FILING DATE:  January 11, 1996
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/005,974
;      FILING DATE:  October 26, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/064
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  3850:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
JS-08-584-040-3850

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   50.0%;  Pred. No. 2.3e+02;
  Matches    8;  Conservative    6;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1457 GTTTATTATGTACAAA 1472
              |: :|::|:|:||| |
Db          2 GUCUAUUAUGUACAUA 17


RESULT 224
JS-08-584-040-4225
; Sequence 4225, Application US/08584040
; Patent No. 6346398
;  GENERAL INFORMATION:
;    APPLICANT:  Pavco, Pamela
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Escobedo, Jaime
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  TREATMENT OF DISEASES OR
;    TITLE OF INVENTION:  CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF VASCULAR ENDOTHELIAL
;    TITLE OF INVENTION:  GROWTH FACTOR
;    NUMBER OF SEQUENCES:  8502
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/584,040
;      FILING DATE:  January 11, 1996
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/005,974
;      FILING DATE:  October 26, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/064
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  4225:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  17 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-584-040-4225

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   56.2%;  Pred. No. 2.3e+02;
  Matches    9;  Conservative    5;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1116 GAATAGTTATAAAGAT 1131
              | |:| ::|:|||||:
Db          2 GGAUAUUUAUAAAGAU 17


RESULT 225
US-08-584-040-4226
; Sequence 4226, Application US/08584040
; Patent No. 6346398
;  GENERAL INFORMATION:
;    APPLICANT:  Pavco, Pamela
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Escobedo, Jaime
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  TREATMENT OF DISEASES OR
;    TITLE OF INVENTION:  CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF VASCULAR ENDOTHELIAL
;    TITLE OF INVENTION:  GROWTH FACTOR
;    NUMBER OF SEQUENCES:  8502
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
```

OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/584,040
FILING DATE: January 11, 1996
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/005,974
FILING DATE: October 26, 1995
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 218/064
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 4226:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
3-08-584-040-4226

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 56.2%; Pred. No. 2.3e+02;
Matches 9; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

y 1116 GAATAGTTATAAAGAT 1131
| |:| ::|:|||||:
b 1 GGAUAUUUAUAAAGAU 16

ESULT 226
S-09-306-420C-2
Sequence 2, Application US/09306420C
Patent No. 6555311
GENERAL INFORMATION:
APPLICANT: LOCARNINI, STEPHEN A
APPLICANT: BARTHOLOMEUSZ, ANGELINE I
APPLICANT: AYE, THEIN T
APPLICANT: DEMAN, ROBERT A
TITLE OF INVENTION: VIRAL VARIANTS AND METHODS FOR DETECTING SAME
FILE REFERENCE: 2551-28
CURRENT APPLICATION NUMBER: US/09/306,420C
CURRENT FILING DATE: 1999-05-06
PRIOR APPLICATION NUMBER: PCT/AU97/00520
PRIOR FILING DATE: 1997-08-15
PRIOR APPLICATION NUMBER: PO3519
PRIOR FILING DATE: 1996-11-08
NUMBER OF SEQ ID NOS: 57
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 2
LENGTH: 17
TYPE: DNA
ORGANISM: Hepatitis B virus
S-09-306-420C-2

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 2.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

y 1556 CTCCAAATTTTTTTTA 1571
||||||||| ||| ||
b 2 CTCCAAATTCTTTATA 17

ESULT 227
S-09-306-420C-4
Sequence 4, Application US/09306420C
Patent No. 6555311
GENERAL INFORMATION:
; APPLICANT: LOCARNINI, STEPHEN A
; APPLICANT: BARTHOLOMEUSZ, ANGELINE I
; APPLICANT: AYE, THEIN T
; APPLICANT: DEMAN, ROBERT A
; TITLE OF INVENTION: VIRAL VARIANTS AND METHODS FOR DETECTING SAME
; FILE REFERENCE: 2551-28
; CURRENT APPLICATION NUMBER: US/09/306,420C
; CURRENT FILING DATE: 1999-05-06
; PRIOR APPLICATION NUMBER: PCT/AU97/00520
; PRIOR FILING DATE: 1997-08-15
; PRIOR APPLICATION NUMBER: PO3519
; PRIOR FILING DATE: 1996-11-08
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 17
; TYPE: DNA
; ORGANISM: Hepatitis B virus
US-09-306-420C-4

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 2.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1556 CTCCAAATTTTTTTTA 1571
||||||||| ||| ||
Db 2 CTCCAAATTCTTTATA 17

RESULT 228
US-09-371-772B-711/c
; Sequence 711, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
; APPLICANT: Ribozyme Pharmaceuticals, Inc.
; APPLICANT: Pavco, Pam
; APPLICANT: McSwiggen, Jim
; APPLICANT: Stinchcomb, Dan
; APPLICANT: Escobedo, Jaime
; TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
; TITLE OF INVENTION: Levels of Vascular Endothelial Growth Factor Receptor
; FILE REFERENCE: MBHB00,876-J (237/198)
; CURRENT APPLICATION NUMBER: US/09/371,772B
; CURRENT FILING DATE: 1999-08-10
; PRIOR APPLICATION NUMBER: US 60/005,974
; PRIOR FILING DATE: 1995-10-26
; PRIOR APPLICATION NUMBER: US 08/584,040
; PRIOR FILING DATE: 1996-01-08
; NUMBER OF SEQ ID NOS: 14225
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 711
; LENGTH: 17
; TYPE: RNA
; ORGANISM: Homo sapiens
US-09-371-772B-711

Query Match 1.0%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 2.3e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1586 ATGGAAATATAAAAGT 1601
||||||| ||||| ||
Db 16 ATGGAAAGATAAAGGT 1

RESULT 229
US-09-371-772B-1080/c
; Sequence 1080, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
; APPLICANT: Ribozyme Pharmaceuticals, Inc.
; APPLICANT: Pavco, Pam
; APPLICANT: McSwiggen, Jim

```
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1080
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
JS-09-371-772B-1080

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1085 ATTTGGAAAAATAGAA 1100
              ||||||||||| | ||
Db         17 ATTTGGAAAAAAAAAA 2


RESULT 230
US-09-371-772B-1081/c
; Sequence 1081, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1081
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
US-09-371-772B-1081

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1085 ATTTGGAAAAATAGAA 1100
              ||||||||||| | ||
Db         16 ATTTGGAAAAAAAAAA 1


RESULT 231
US-09-371-772B-1352/c
; Sequence 1352, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1352
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
US-09-371-772B-1352

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1201 TAGATTAAACAAACAA 1216
              ||| | ||||||||||
Db         16 TAGGTAAAACAAACAA 1


RESULT 232
US-09-371-772B-1617
; Sequence 1617, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions R
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1617
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
US-09-371-772B-1617

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   50.0%;  Pred. No. 2.3e+02;
  Matches    8;  Conservative    6;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1457 GTTTATTATGTACAAA 1472
              |: :|::|:|:||| |
Db          2 GUCUAUUAUGUACAUA 17


RESULT 233
US-09-371-772B-1992
; Sequence 1992, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
```

```
  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
  FILE REFERENCE: MBHB00,876-J (237/198)
  CURRENT APPLICATION NUMBER: US/09/371,772B
  CURRENT FILING DATE:  1999-08-10
  PRIOR APPLICATION NUMBER: US 60/005,974
  PRIOR FILING DATE: 1995-10-26
  PRIOR APPLICATION NUMBER: US 08/584,040
  PRIOR FILING DATE: 1996-01-08
  NUMBER OF SEQ ID NOS: 14225
  SOFTWARE: PatentIn version 3.0
SEQ ID NO 1992
  LENGTH: 17
  TYPE: RNA
  ORGANISM: Homo sapiens
S-09-371-772B-1992

Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
Best Local Similarity   56.2%;  Pred. No. 2.3e+02;
Matches    9;  Conservative    5;  Mismatches    2;  Indels    0;  Gaps    0;

      1116 GAATAGTTATAAAGAT 1131
           | |:| ::|:|||||:
         2 GGAUAUUUAUAAAGAU 17


ESULT 234
S-09-371-772B-1993
Sequence 1993, Application US/09371772B
Patent No. 6566127
GENERAL INFORMATION:
  APPLICANT: Ribozyme Pharmaceuticals, Inc.
  APPLICANT:  Pavco, Pam
  APPLICANT:  McSwiggen, Jim
  APPLICANT:  Stinchcomb, Dan
  APPLICANT:  Escobedo, Jaime
  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
  FILE REFERENCE: MBHB00,876-J (237/198)
  CURRENT APPLICATION NUMBER: US/09/371,772B
  CURRENT FILING DATE:  1999-08-10
  PRIOR APPLICATION NUMBER: US 60/005,974
  PRIOR FILING DATE: 1995-10-26
  PRIOR APPLICATION NUMBER: US 08/584,040
  PRIOR FILING DATE: 1996-01-08
  NUMBER OF SEQ ID NOS: 14225
  SOFTWARE: PatentIn version 3.0
SEQ ID NO 1993
  LENGTH: 17
  TYPE: RNA
  ORGANISM: Homo sapiens
S-09-371-772B-1993

Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
Best Local Similarity   56.2%;  Pred. No. 2.3e+02;
Matches    9;  Conservative    5;  Mismatches    2;  Indels    0;  Gaps    0;

      1116 GAATAGTTATAAAGAT 1131
           | |:| ::|:|||||:
         1 GGAUAUUUAUAAAGAU 16


ESULT 235
S-09-371-772B-4747
Sequence 4747, Application US/09371772B
Patent No. 6566127
GENERAL INFORMATION:
  APPLICANT: Ribozyme Pharmaceuticals, Inc.
  APPLICANT:  Pavco, Pam
  APPLICANT:  McSwiggen, Jim
  APPLICANT:  Stinchcomb, Dan
  APPLICANT:  Escobedo, Jaime
  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 4747
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
US-09-371-772B-4747

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   62.5%;  Pred. No. 2.3e+02;
  Matches   10;  Conservative    4;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        935 ATTAGCCACCATCTTA 950
              |:: |||||||:|: |
Db          2 AUUGGCCACCAUCUGA 17


RESULT 236
US-09-371-772B-5267/c
; Sequence 5267, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 5267
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
US-09-371-772B-5267

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1347 TGCCAGCTGTGTTGGT 1362
              | ||| ||||||||||
Db         16 TCCCAACTGTGTTGGT 1


RESULT 237
US-09-371-772B-6945/c
; Sequence 6945, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
```

```
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 6945
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
JS-09-371-772B-6945

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1438 TTCTTGCTGGTTGAAA 1453
              ||| ||||||| ||||
Db         17 TTCCTGCTGGTGGAAA 2


RESULT 238
JS-09-371-772B-6946/c
; Sequence 6946, Application US/09371772B
; Patent No. 6566127
; GENERAL INFORMATION:
;  APPLICANT: Ribozyme Pharmaceuticals, Inc.
;  APPLICANT:  Pavco, Pam
;  APPLICANT:  McSwiggen, Jim
;  APPLICANT:  Stinchcomb, Dan
;  APPLICANT:  Escobedo, Jaime
;  TITLE OF INVENTION: Method and Reagent for the Treatment of Diseases or Conditions Re
;  TITLE OF INVENTION:  Levels of Vascular Endothelial Growth Factor Receptor
;  FILE REFERENCE: MBHB00,876-J (237/198)
;  CURRENT APPLICATION NUMBER: US/09/371,772B
;  CURRENT FILING DATE:  1999-08-10
;  PRIOR APPLICATION NUMBER: US 60/005,974
;  PRIOR FILING DATE: 1995-10-26
;  PRIOR APPLICATION NUMBER: US 08/584,040
;  PRIOR FILING DATE: 1996-01-08
;  NUMBER OF SEQ ID NOS: 14225
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 6946
;   LENGTH: 17
;   TYPE: RNA
;   ORGANISM: Homo sapiens
JS-09-371-772B-6946

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 2.3e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1438 TTCTTGCTGGTTGAAA 1453
              ||| ||||||| ||||
Db         16 TTCCTGCTGGTGGAAA 1


RESULT 239
US-08-867-941-37/c
; Sequence 37, Application US/08867941
; Patent No. 5977337
;  GENERAL INFORMATION:
;    APPLICANT:  Loosmore, Sheena M
;    APPLICANT:  Du, Run-Pan
;    APPLICANT:  Wang, Quijun
;    APPLICANT:  Yang, Yan-Ping
;    APPLICANT:  Klein, Michel H
;    TITLE OF INVENTION:  LACTOFERRIN RECEPTOR GENES OF MORAXELLA
;    NUMBER OF SEQUENCES:  67
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sim & McBurney
;      STREET:  6th Floor, 330 University Avenue
;      CITY:  Toronto
;      STATE:  Ontario
;      COUNTRY:  Canada
;      ZIP:  M5G 1R7
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/867,941
;      FILING DATE:  03-JUN-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Stewart, Michael I
;      REGISTRATION NUMBER:  24,973
;      REFERENCE/DOCKET NUMBER:  1038-681 MIS:jb
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (416) 595-1155
;      TELEFAX:  (416) 595-1163
;  INFORMATION FOR SEQ ID NO:  37:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  18 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-867-941-37

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1233 TTAAATTTTCATTTCA 1248
              |||||  |||||||||
Db         18 TTAAAACTTCATTTCA 3


RESULT 240
US-09-200-141-22/c
; Sequence 22, Application US/09200141
; Patent No. 5985663
; GENERAL INFORMATION:
;  APPLICANT: C. Frank Bennett
;  APPLICANT: Lex M. Cowsert
;  TITLE OF INVENTION: ANTISENSE MODULATION OF Interleukin-15 EXPRESSION
;  FILE REFERENCE: RTS-0022
;  CURRENT APPLICATION NUMBER: US/09/200,141
;  CURRENT FILING DATE: 1998-11-25
;  NUMBER OF SEQ ID NOS: 47
; SEQ ID NO 22
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
US-09-200-141-22

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1339 CTTGTCATTGCCAGCT 1354
              |||| ||| |||||||
Db         16 CTTGCCATAGCCAGCT 1


RESULT 241
US-09-339-964-42/c
; Sequence 42, Application US/09339964
; Patent No. 6025198
; GENERAL INFORMATION:
```

APPLICANT: C. Frank Bennett
APPLICANT: Lex M. Cowsert
TITLE OF INVENTION: ANTISENSE MODULATION OF SHIP-2 EXPRESSION
FILE REFERENCE: RTS-0065
CURRENT APPLICATION NUMBER: US/09/339,964
CURRENT FILING DATE: 1999-06-25
NUMBER OF SEQ ID NOS: 47
SEQ ID NO 42
LENGTH: 18
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Antisense Oligonucleotide
-09-339-964-42

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 2.6e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

469 TGTATTGTGTGGGTCT 484
||| ||||||||||
16 TGTTCTGTGTGGGTCT 1

SULT 242
-09-156-807-47/c
Sequence 47, Application US/09156807
Patent No. 6030786
GENERAL INFORMATION:
APPLICANT: Cowsert, Lex M.
TITLE OF INVENTION: ANTISENSE MODULATION OF RhoC EXPRESSION
FILE REFERENCE: RTS-0014
CURRENT APPLICATION NUMBER: US/09/156,807
CURRENT FILING DATE: 1998-09-18
NUMBER OF SEQ ID NOS: 47
SEQ ID NO 47
LENGTH: 18
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Antisense Oligonucleotide
-09-156-807-47

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 2.6e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

827 CCTGGATTTTTTTCTG 842
|||||| || |||||||
18 CCTGGAGTTGTTTCTG 3

SULT 243
-09-289-377-22/c
Sequence 22, Application US/09289377
Patent No. 6046321
GENERAL INFORMATION:
APPLICANT: Lex M. Cowsert
TITLE OF INVENTION: ANTISENSE MODULATION OF G-ALPHA-I1 EXPRESSION
FILE REFERENCE: RTS-0058
CURRENT APPLICATION NUMBER: US/09/289,377
CURRENT FILING DATE: 1999-04-09
NUMBER OF SEQ ID NOS: 47
SEQ ID NO 22
LENGTH: 18
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Antisense Oligonucleotide
-09-289-377-22

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 2.6e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1486 TATTATTTAAATGACT 1501
|| ||||| |||||||
Db 18 TACTATTTGAATGACT 3

RESULT 244
US-09-074-658-37/c
; Sequence 37, Application US/09074658
; Patent No. 6184371
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Run-Pan Du
; APPLICANT: Quijun Wang
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOFERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 78
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/074,658
; FILING DATE: 08-MAY-1998
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-795
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 37:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 18 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-074-658-37

Query Match 1.0%; Score 12.8; DB 1; Length 18;
Best Local Similarity 87.5%; Pred. No. 2.6e+02;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1233 TTAAATTTTCATTTCA 1248
||||| |||||||||
Db 18 TTAAAACTTCATTTCA 3

RESULT 245
US-08-930-117-5
; Sequence 5, Application US/08930117
; Patent No. 6210879
; GENERAL INFORMATION:
; APPLICANT: MELONI, Rolando
; APPLICANT: LAURENT, Claudine
; APPLICANT: MALLET, Jacques
; TITLE OF INVENTION: METHOD FOR DIAGNOSING SCHIZOPHRENIA
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Rhone-Poulenc Rorer Inc.
; STREET: 500 Arcola Road, Mailstop 3C43
; CITY: Collegeville

```
      STATE:  PA
      COUNTRY:  USA
      ZIP:  19426
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/930,117
      FILING DATE:
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  FR 95/05264
      FILING DATE:  03-MAY-1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  WO PCT/FR96/00650
      FILING DATE:  29-APR-1996
    ATTORNEY/AGENT INFORMATION:
      NAME:  Fehlner Esq., Paul F.
      REGISTRATION NUMBER:  35,135
      REFERENCE/DOCKET NUMBER:  ST95028-US
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (610) 454-3839
      TELEFAX:  (610) 454-3808
  INFORMATION FOR SEQ ID NO:  5:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  18 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  cDNA
US-08-930-117-5

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        905 GTTTCTCCTTTATTTC 920
              ||| |||| |||||||
Db          1 GTTCCTCCCTTATTTC 16


RESULT 246
US-09-721-822A-112
; Sequence 112, Application US/09721822A
; Patent No. 6306606
; GENERAL INFORMATION:
;  APPLICANT: Michael J. Weber
;  APPLICANT:  Jacqueline Wyatt
;  APPLICANT:  Lex M. Cowsert
;  TITLE OF INVENTION: ANTISENSE MODULATION OF MP-1 EXPRESSION
;  FILE REFERENCE: RTS-0142
;  CURRENT APPLICATION NUMBER: US/09/721,822A
;  CURRENT FILING DATE:  2000-11-22
;  NUMBER OF SEQ ID NOS: 135
; SEQ ID NO 112
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
US-09-721-822A-112

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1353 CTGTGTTGGTAGTGCT 1368
              ||||||||| | ||||
Db          3 CTGTGTTGGCACTGCT 18


RESULT 247
US-09-387-341-149/c
; Sequence 149, Application US/09387341
; Patent No. 6410323
; GENERAL INFORMATION:
;  APPLICANT: Roberts, M. Luisa
;  APPLICANT: Cowsert, Lex M.
;  TITLE OF INVENTION: Antisense Modulation of Human Rho Family Gene
;  TITLE OF INVENTION: Expression
;  FILE REFERENCE: ISPH-0404
;  CURRENT APPLICATION NUMBER: US/09/387,341
;  CURRENT FILING DATE: 1999-08-31
;  EARLIER APPLICATION NUMBER: 09/156,424
;  EARLIER FILING DATE: 1998-09-18
;  EARLIER APPLICATION NUMBER: 09/156,979
;  EARLIER FILING DATE: 1998-09-18
;  EARLIER APPLICATION NUMBER: 09/156,807
;  EARLIER FILING DATE: 1998-09-18
;  EARLIER APPLICATION NUMBER: 09/161,015
;  EARLIER FILING DATE: 1998-09-25
;  NUMBER OF SEQ ID NOS: 233
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 149
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:Synthetic
US-09-387-341-149

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        827 CCTGGATTTTTTTCTG 842
              |||||| || ||||||
Db         18 CCTGGAGTTGTTTCTG 3


RESULT 248
US-08-745-485A-15
; Sequence 15, Application US/08745485A
; Patent No. 6440660
;   GENERAL INFORMATION:
;        APPLICANT: Barker, Jr., Robert H.
;                   Rapaport, Eliezer
;                   Zamecnik, Paul C.
;        TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED REVERSAL OF
;                            DRUG RESISTANCE
;        NUMBER OF SEQUENCES: 16
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Hale and Dorr LLP
;             STREET: 60 State Street
;             CITY: Boston
;             STATE: Massachusetts
;             COUNTRY: United States
;             ZIP: 02109
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/08/745,485A
;             FILING DATE: 12-No. 6440660-1996
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/634,588
;             FILING DATE: 18-APR-1996
;             APPLICATION NUMBER: US 08/560,474
;             FILING DATE: 17-NOV-1995
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Kerner, Ann-Louise
```

```
            REGISTRATION NUMBER: 33,523
            REFERENCE/DOCKET NUMBER: HYZ047CIP(47508.253)
         TELECOMMUNICATION INFORMATION:
            TELEPHONE: (617)526-6000
            TELEFAX: (617)526-5000
   INFORMATION FOR SEQ ID NO: 15:
         SEQUENCE CHARACTERISTICS:
            LENGTH: 18 base pairs
            TYPE: nucleic acid
            STRANDEDNESS: single
            TOPOLOGY: linear
         MOLECULE TYPE: cDNA
         HYPOTHETICAL: NO
         ANTI-SENSE: YES
         SEQUENCE DESCRIPTION: SEQ ID NO: 15:
S-08-745-485A-15

 Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
 Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
 Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

y       1259 AAATAATTTTTTAGTA 1274
             ||||||||| || |||
b          2 AAATAATTTCTTCGTA 17


ESULT 249
S-08-745-485A-16/c
 Sequence 16, Application US/08745485A
 Patent No. 6440660
   GENERAL INFORMATION:
         APPLICANT: Barker, Jr., Robert H.
                    Rapaport, Eliezer
                    Zamecnik, Paul C.
         TITLE OF INVENTION: OLIGONUCLEOTIDE MEDIATED REVERSAL OF
                             DRUG RESISTANCE
         NUMBER OF SEQUENCES: 16
         CORRESPONDENCE ADDRESS:
            ADDRESSEE: Hale and Dorr LLP
            STREET: 60 State Street
            CITY: Boston
            STATE: Massachusetts
            COUNTRY: United States
            ZIP: 02109
         COMPUTER READABLE FORM:
            MEDIUM TYPE: Floppy disk
            COMPUTER: IBM PC compatible
            OPERATING SYSTEM: PC-DOS/MS-DOS
            SOFTWARE: PatentIn Release #1.0, Version #1.30
         CURRENT APPLICATION DATA:
            APPLICATION NUMBER: US/08/745,485A
            FILING DATE: 12-No. 6440660-1996
            CLASSIFICATION: <Unknown>
         PRIOR APPLICATION DATA:
            APPLICATION NUMBER: US 08/634,588
            FILING DATE: 18-APR-1996
            APPLICATION NUMBER: US 08/560,474
            FILING DATE: 17-NOV-1995
         ATTORNEY/AGENT INFORMATION:
            NAME: Kerner, Ann-Louise
            REGISTRATION NUMBER: 33,523
            REFERENCE/DOCKET NUMBER: HYZ047CIP(47508.253)
         TELECOMMUNICATION INFORMATION:
            TELEPHONE: (617)526-6000
            TELEFAX: (617)526-5000
   INFORMATION FOR SEQ ID NO: 16:
         SEQUENCE CHARACTERISTICS:
            LENGTH: 18 base pairs
            TYPE: nucleic acid
            STRANDEDNESS: single
            TOPOLOGY: linear
         MOLECULE TYPE: cDNA
         HYPOTHETICAL: NO
         ANTI-SENSE: YES
         SEQUENCE DESCRIPTION: SEQ ID NO: 16:
US-08-745-485A-16

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1259 AAATAATTTTTTAGTA 1274
              ||||||||| || |||
Db         17 AAATAATTTCTTCGTA 2


RESULT 250
US-09-425-233-12/c
; Sequence 12, Application US/09425233
; Patent No. 6472200
;  GENERAL INFORMATION:
;    APPLICANT:  EDUARDO MITRANI
;    TITLE OF INVENTION:  A DEVICE AND METHOD FOR PERFORMING A
;    TITLE OF INVENTION:  BIOLOGICAL MODIFICATION OF A FLUID
;    NUMBER OF SEQUENCES:  12
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Mark M. Friedman c/o Anthony Castorina
;      STREET:  2001 Jefferson Davis Highway, Suite 207
;      CITY:  Arlington
;      STATE:  Virginia
;      COUNTRY:  United States of America
;      ZIP:  22202
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  1.44 megabyte, 3.5" microdisk
;      COMPUTER:  Twinhead* Slimnote-890TX
;      OPERATING SYSTEM:  MS DOS version 6.2,
;      OPERATING SYSTEM:  Windows 98
;      SOFTWARE:  Word for Windows version 6.0 converted to
;      SOFTWARE:  an ASCI file
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/425,233
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Friedmam, Mark M.
;      REGISTRATION NUMBER:  33,883
;      REFERENCE/DOCKET NUMBER:  325/68
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  972-3-5625553
;      TELEFAX:  972-3-5625554
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  18
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-09-425-233-12

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        496 GCCAGATGCAATACAA 511
              ||| || |||||||||
Db         18 GCCTGAGGCAATACAA 3


RESULT 251
US-09-319-588C-35
; Sequence 35, Application US/09319588C
; Patent No. 6509018
; GENERAL INFORMATION:
```

```
;  APPLICANT: INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE-INSERM
;  APPLICANT:  ASSISTANCE PUBLIQUE-HOPITAUX DE PARIS
;  APPLICANT:  INSTITUT PASTEUR
;  APPLICANT:  MAUCLERE, Philippe
;  APPLICANT:  LOUSSERT-AJAKA, Ibtissam
;  APPLICANT:  SIMON, Francois
;  APPLICANT:  SARAGOSTI, Sentob
;  APPLICANT:  BARRE-SINOUSSI, Francoise
;  TITLE OF INVENTION: NON-M NON-O HIV STRAINS, FRAGMENTS AND APPLICATIONS.
;  FILE REFERENCE: 598US12
;  CURRENT APPLICATION NUMBER: US/09/319,588C
;  CURRENT FILING DATE:  1999-08-27
;  PRIOR APPLICATION NUMBER: FR96/15087
;  PRIOR FILING DATE: 1996-12-09
;  NUMBER OF SEQ ID NOS: 98
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 35
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: artificial sequence
;   FEATURE:
;   OTHER INFORMATION: primer
US-09-319-588C-35

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        410 TATCCAAGAATCAGTG 425
              |||||| ||||||| |
Db          3 TATCCAGGAATCAGAG 18


RESULT 252
US-09-319-588C-91
; Sequence 91, Application US/09319588C
; Patent No. 6509018
; GENERAL INFORMATION:
;  APPLICANT: INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE-INSERM
;  APPLICANT:  ASSISTANCE PUBLIQUE-HOPITAUX DE PARIS
;  APPLICANT:  INSTITUT PASTEUR
;  APPLICANT:  MAUCLERE, Philippe
;  APPLICANT:  LOUSSERT-AJAKA, Ibtissam
;  APPLICANT:  SIMON, Francois
;  APPLICANT:  SARAGOSTI, Sentob
;  APPLICANT:  BARRE-SINOUSSI, Francoise
;  TITLE OF INVENTION: NON-M NON-O HIV STRAINS, FRAGMENTS AND APPLICATIONS.
;  FILE REFERENCE: 598US12
;  CURRENT APPLICATION NUMBER: US/09/319,588C
;  CURRENT FILING DATE:  1999-08-27
;  PRIOR APPLICATION NUMBER: FR96/15087
;  PRIOR FILING DATE: 1996-12-09
;  NUMBER OF SEQ ID NOS: 98
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 91 (corresponds to YRT2-2 pol of Figure 1)
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: artificial sequence
;   FEATURE:
;   OTHER INFORMATION: primer
US-09-319-588C-91

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        410 TATCCAAGAATCAGTG 425
              |||||| ||||||| |
Db          3 TATCCAGGAATCAGAG 18


RESULT 253
US-09-422-978-5250/c
; Sequence 5250, Application US/09422978
; Patent No. 6537751
; GENERAL INFORMATION:
;  APPLICANT: Cohen, Daniel
;  APPLICANT: Blumenfeld, Marta
;  APPLICANT: Chumakov, Ilya
;  TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
;  FILE REFERENCE: GENSET.020CP1
;  CURRENT APPLICATION NUMBER: US/09/422,978
;  CURRENT FILING DATE: 1999-10-20
;  EARLIER APPLICATION NUMBER: US 09/298,850
;  EARLIER FILING DATE: 1999-04-21
;  EARLIER APPLICATION NUMBER: US 60/109,732
;  EARLIER FILING DATE: 1998-11-23
;  EARLIER APPLICATION NUMBER: US 60/082,614
;  EARLIER FILING DATE: 1998-04-21
;  NUMBER OF SEQ ID NOS: 11796
; SEQ ID NO 5250
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Homo Sapiens
;   FEATURE:
;   NAME/KEY: primer_bind
;   LOCATION: 1..18
;   OTHER INFORMATION: upstream amplification primer 99-22771 for SEQ 1316,
US-09-422-978-5250

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        820 TGGAAATCCTGGATTT 835
              |||||| ||||| |||
Db         17 TGGAAAGCCTGGTTTT 2


RESULT 254
US-09-422-978-6086
; Sequence 6086, Application US/09422978
; Patent No. 6537751
; GENERAL INFORMATION:
;  APPLICANT: Cohen, Daniel
;  APPLICANT: Blumenfeld, Marta
;  APPLICANT: Chumakov, Ilya
;  TITLE OF INVENTION: Biallelic markers for use in constructing a high density...
;  FILE REFERENCE: GENSET.020CP1
;  CURRENT APPLICATION NUMBER: US/09/422,978
;  CURRENT FILING DATE: 1999-10-20
;  EARLIER APPLICATION NUMBER: US 09/298,850
;  EARLIER FILING DATE: 1999-04-21
;  EARLIER APPLICATION NUMBER: US 60/109,732
;  EARLIER FILING DATE: 1998-11-23
;  EARLIER APPLICATION NUMBER: US 60/082,614
;  EARLIER FILING DATE: 1998-04-21
;  NUMBER OF SEQ ID NOS: 11796
; SEQ ID NO 6086
;   LENGTH: 18
;   TYPE: DNA
;   ORGANISM: Homo Sapiens
;   FEATURE:
;   NAME/KEY: primer_bind
;   LOCATION: 1..18
;   OTHER INFORMATION: upstream amplification primer 99-8831 for SEQ 2152,
US-09-422-978-6086

  Query Match             1.0%;  Score 12.8;  DB 1;  Length 18;
  Best Local Similarity   87.5%;  Pred. No. 2.6e+02;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1566 TTTTTACTGTTTCTGA 1581
              | |||||||||||| ||
Db          1 TGTTTACTGTTTCGGA 16
```

```
ESULT 255
S-09-468-265-20
 Sequence 20, Application US/09468265
 Patent No. 6379928
 GENERAL INFORMATION:
  APPLICANT: Berka, Randy M
  APPLICANT:  Cullen, Daniel
  APPLICANT:  Gray, Gregory L
  APPLICANT:  Hayenga, Kirk J
  APPLICANT:  Lawlis, Virgil B
  TITLE OF INVENTION: Heterologous Polypeptides Expressed in Filamentous Fungi, Process
  TITLE OF INVENTION:  Making Same and Vectors for Making Same
  FILE REFERENCE: A-42909-5
  CURRENT APPLICATION NUMBER: US/09/468,265
  CURRENT FILING DATE:  1999-12-10
  PRIOR APPLICATION NUMBER: 08/484,384
  PRIOR FILING DATE: 1995-06-07
  PRIOR APPLICATION NUMBER: 08/284,942
  PRIOR FILING DATE: 1994-08-02
  PRIOR APPLICATION NUMBER: 07/413,010
  PRIOR FILING DATE: 1989-09-25
  PRIOR APPLICATION NUMBER: 07/163,219
  PRIOR FILING DATE: 1988-02-26
  PRIOR APPLICATION NUMBER: 06/882,224
  PRIOR FILING DATE: 1986-07-07
  PRIOR APPLICATION NUMBER: 06/771,374
  PRIOR FILING DATE: 1985-08-29
  NUMBER OF SEQ ID NOS: 28
  SOFTWARE: PatentIn version 3.1
 SEQ ID NO 20
    LENGTH: 17
    TYPE: DNA
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: synthetic oligonucleotide probes
3-09-468-265-20

 Query Match              1.0%;  Score 12.6;  DB 1;  Length 17;
 Best Local Similarity   66.7%;  Pred. No. 2.6e+02;
 Matches   10;  Conservative    5;  Mismatches    0;  Indels    0;  Gaps    0;

/       1271 AGTATAAGTACATTA 1285
             |:||:||:||:||:|
>          2 ARTAYAARTAYATHA 16


ESULT 256
3-08-646-789A-4/c
 Sequence 4, Application US/08646789A
 Patent No. 6022863
  GENERAL INFORMATION:
    APPLICANT:  Peyman, John A.
    TITLE OF INVENTION:  REGULATION OF GENE EXPRESSION
    NUMBER OF SEQUENCES:  101
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  PENNIE & EDMONDS
      STREET:  1155 Avenue of the Americas
      CITY:  New York
      STATE:  New York
      COUNTRY:  U.S.A.
      ZIP:  10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/646,789A
      FILING DATE:  May 21, 1996
      CLASSIFICATION:  800
    ATTORNEY/AGENT INFORMATION:
      NAME:  Misrock, S. Leslie
      REGISTRATION NUMBER:  18,872
      REFERENCE/DOCKET NUMBER:  6523-006
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (212) 790-9090
      TELEFAX:  (212) 869-9741/8864
      TELEX:  66141 PENNIE
  INFORMATION FOR SEQ ID NO:  4:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  14 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  DNA
US-08-646-789A-4

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 14;
  Best Local Similarity   92.9%;  Pred. No. 1.7e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1016 TTTCAAGTGTAACT 1029
              |||||||||  ||||
Db         14 TTTCAAGTGAAACT 1


RESULT 257
US-08-646-789A-79/c
; Sequence 79, Application US/08646789A
; Patent No. 6022863
;  GENERAL INFORMATION:
;    APPLICANT:  Peyman, John A.
;    TITLE OF INVENTION:  REGULATION OF GENE EXPRESSION
;    NUMBER OF SEQUENCES:  101
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  PENNIE & EDMONDS
;      STREET:  1155 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  U.S.A.
;      ZIP:  10036-2711
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/646,789A
;      FILING DATE:  May 21, 1996
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Misrock, S. Leslie
;      REGISTRATION NUMBER:  18,872
;      REFERENCE/DOCKET NUMBER:  6523-006
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212) 790-9090
;      TELEFAX:  (212) 869-9741/8864
;      TELEX:  66141 PENNIE
;  INFORMATION FOR SEQ ID NO:  79:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  14 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  RNA
US-08-646-789A-79

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 14;
  Best Local Similarity   92.9%;  Pred. No. 1.7e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1016 TTTCAAGTGTAACT 1029
              |||||||||  ||||
Db         14 TTTCAAGTGAAACT 1
```

```
RESULT 258
US-08-617-010C-14
; Sequence 14, Application US/08617010C
; Patent No. 6194144
;  GENERAL INFORMATION:
;    APPLICANT:  Hubert K ster
;    TITLE OF INVENTION:  DNA SEQUENCING BY MASS SPECTROMETRY
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Heller Ehrman White & McAuliffe
;      STREET:  4250 Executive Square, 7th Floor
;      CITY:  La Jolla
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037-9103
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  ASCII
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/617,010C
;      FILING DATE:  18-MAR-1996
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/178,216
;      FILING DATE:  06-JAN-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/001,323
;      FILING DATE:  07-JAN-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Seidman, Stephanie L
;      REGISTRATION NUMBER:  33,779
;      REFERENCE/DOCKET NUMBER:  24736-2012
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  858-450-8400
;      TELEFAX:  619-587-5360
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  14 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-617-010C-14

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
  Best Local Similarity   92.9%;  Pred. No. 1.7e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         458 TCAACACTTCATGT 471
               ||||||| |||||
Db           1 TCAACACTGCATGT 14


RESULT 259
US-09-566-591-14
; Sequence 14, Application US/09566591
; Patent No. 6238871
;   GENERAL INFORMATION:
;        APPLICANT: Hubert K"ster
;        TITLE OF INVENTION: DNA SEQUENCING BY MASS SPECTROMETRY
;        NUMBER OF SEQUENCES: 21
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Heller Ehrman White & McAuliffe
;             STREET: 4250 Executive Square, 7th Floor
;             CITY: La Jolla
;             STATE: CA
;             COUNTRY: USA
;             ZIP: 92037-9103
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Diskette
;             COMPUTER: IBM Compatible
;             OPERATING SYSTEM: DOS
;             SOFTWARE: ASCII
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/566,591
;             FILING DATE: 08-May-2000
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/617,010
;             FILING DATE: 18-MAR-1996
;             APPLICATION NUMBER: 08/178,216
;             FILING DATE: 06-JAN-1994
;             APPLICATION NUMBER: 08/001,323
;             FILING DATE: 07-JAN-1993
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Seidman, Stephanie L
;             REGISTRATION NUMBER: 33,779
;             REFERENCE/DOCKET NUMBER: 24736-2012B
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: 858-450-8400
;             TELEFAX: 858-587-5360
;             TELEX: <Unknown>
;   INFORMATION FOR SEQ ID NO: 14:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 14 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: cDNA
;        SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-09-566-591-14

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
  Best Local Similarity   92.9%;  Pred. No. 1.7e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         458 TCAACACTTCATGT 471
               ||||||| |||||
Db           1 TCAACACTGCATGT 14


RESULT 260
US-09-054-832-37
; Sequence 37, Application US/09054832
; Patent No. 6312894
;  GENERAL INFORMATION:
;    APPLICANT:  Meyer, Rich
;    TITLE OF INVENTION:  IMPROVED HYBRIDIZATION AND
;    TITLE OF INVENTION:  MISMATCH DISCRIMINATION USING OLIGONUCLEOTIDES
;    TITLE OF INVENTION:  CONJUGATED TO MINOR GROOVE BINDERS
;    NUMBER OF SEQUENCES:  40
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 PAGE MILL ROAD
;      CITY:  PALO ALTO
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  Windows
;      SOFTWARE:  FastSEQ for Windows Version 2.0b
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/054,832
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/415,370
;      FILING DATE:  03-APR-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Brennan, Sean M
```

```
      REGISTRATION NUMBER:  39,917
      REFERENCE/DOCKET NUMBER:  34469-20004.20
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  650-813-5600
      TELEFAX:  650-494-0792
      TELEX:  706141
  INFORMATION FOR SEQ ID NO:  37:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  14 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
3-09-054-832-37

 Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
 Best Local Similarity   92.9%;  Pred. No. 1.7e+02;
 Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Y       1564 TTTTTTTACTGTTT 1577
             |||| ||||||||||
D          1 TTTTGTTACTGTTT 14


ESULT 261
3-08-744-481A-24
 Sequence 24, Application US/08744481A
 Patent No. 6428955
  GENERAL INFORMATION:
    APPLICANT:  K ster, Hubert
    TITLE OF INVENTION:  DNA DIAGNOSTICS BASED ON MASS SPECTROMETRY
    NUMBER OF SEQUENCES:  55
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  HELLER EHRMAN WHITE & MCAULIFFE
      STREET:  4250 Executive Square, Suite 700
      CITY:  La Jolla
      STATE:  California
      COUNTRY:  USA
      ZIP:  92037-9103
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  Floppy disk
      COMPUTER:  IBM PC compatible
      OPERATING SYSTEM:  PC-DOS/MS-DOS
      SOFTWARE:  PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/744,481A
      FILING DATE:  No. 6428955ember 6, 1996
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:  08/617,256
      FILING DATE:  March 18, 1996
    ATTORNEY/AGENT INFORMATION:
      NAME:  Seidman, Stephanie L.
      REGISTRATION NUMBER:  33,779
      REFERENCE/DOCKET NUMBER:  24736-2004
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (617)450-8400
      TELEFAX:  (617)587-5360
  INFORMATION FOR SEQ ID NO:  24:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  14 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
    MOLECULE TYPE:  cDNA
-08-744-481A-24

Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
Best Local Similarity   92.9%;  Pred. No. 1.7e+02;
Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

        458 TCAACACTTCATGT 471
            |||||||| |||||
          1 TCAACACTGCATGT 14
```

```
RESULT 262
US-09-640-953-37
; Sequence 37, Application US/09640953
; Patent No. 6492346
;  GENERAL INFORMATION:
;       APPLICANT: Meyer, Rich
;       TITLE OF INVENTION: IMPROVED HYBRIDIZATION AND
;                           MISMATCH DISCRIMINATION USING OLIGONUCLEOTIDES
;                           CONJUGATED TO MINOR GROOVE BINDERS
;       NUMBER OF SEQUENCES: 40
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: MORRISON & FOERSTER
;            STREET: 755 PAGE MILL ROAD
;            CITY: PALO ALTO
;            STATE: CA
;            COUNTRY: USA
;            ZIP: 94304-1018
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Diskette
;            COMPUTER: IBM Compatible
;            OPERATING SYSTEM: Windows
;            SOFTWARE: FastSEQ for Windows Version 2.0b
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/640,953
;            FILING DATE: 16-Aug-2000
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: US/09/054,832
;            FILING DATE: 03-APR-1998
;            APPLICATION NUMBER: 08/415,370
;            FILING DATE: 03-APR-1995
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Brennan, Sean M
;            REGISTRATION NUMBER: 39,917
;            REFERENCE/DOCKET NUMBER: 34469-20004.20
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: 650-813-5600
;            TELEFAX: 650-494-0792
;            TELEX: 706141
;  INFORMATION FOR SEQ ID NO: 37:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 14 base pairs
;            TYPE: nucleic acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       SEQUENCE DESCRIPTION: SEQ ID NO: 37:
US-09-640-953-37

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 14;
  Best Local Similarity   92.9%;  Pred. No. 1.7e+02;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1564 TTTTTTTACTGTTT 1577
              |||| ||||||||||
Db          1 TTTTGTTACTGTTT 14


RESULT 263
US-08-319-492B-160
; Sequence 160, Application US/08319492B
; Patent No. 5616488
;  GENERAL INFORMATION:
;    APPLICANT:  Sullivan, Sean M.
;    APPLICANT:  Draper, Kenneth G.
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF DISEASES
;    TITLE OF INVENTION:  OR CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF IL-5
;    NUMBER OF SEQUENCES:  751
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
```

```
;       STREET:  633 West Fifth Street
;       STREET:  Suite 4700
;       CITY:  Los Angeles
;       STATE:  California
;       COUNTRY:  U.S.A.
;       ZIP:  90071
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;       MEDIUM TYPE:  storage
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  IBM P.C. DOS 5.0
;       SOFTWARE:  Word Perfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/319,492B
;       FILING DATE:  October 7, 1994
;     PRIOR APPLICATION DATA:
;     PRIOR APPLICATION DATA:  including application
;     PRIOR APPLICATION DATA:  described below:                Two
;       APPLICATION NUMBER:  08/008,895
;       FILING DATE:  January 19, 1993
;       APPLICATION NUMBER:  07/989,849
;       FILING DATE:  December 7, 1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  209/276
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;   INFORMATION FOR SEQ ID NO:  160:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  15 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-319-492B-160

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   71.4%;  Pred. No. 2.1e+02;
  Matches   10;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1081 AAGAATTTGGAAAA 1094
              |||||:::|| |||
Db          2 AAGAAUUUGGUAAA 15


RESULT 264
US-08-319-492B-161
; Sequence 161, Application US/08319492B
; Patent No. 5616488
;  GENERAL INFORMATION:
;    APPLICANT:  Sullivan, Sean M.
;    APPLICANT:  Draper, Kenneth G.
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF DISEASES
;    TITLE OF INVENTION:  OR CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF IL-5
;    NUMBER OF SEQUENCES:  751
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/319,492B
;      FILING DATE:  October 7, 1994
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                Two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/276
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  161:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-319-492B-161

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   71.4%;  Pred. No. 2.1e+02;
  Matches   10;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1081 AAGAATTTGGAAAA 1094
              |||||:::|| |||
Db          1 AAGAAUUUGGUAAA 14


RESULT 265
US-08-088-658-52/c
; Sequence 52, Application US/08088658
; Patent No. 5641625
;  GENERAL INFORMATION:
;    APPLICANT:  Ecker, David J.
;    APPLICANT:  Buchardt, Ole
;    APPLICANT:  Egholm, Michael
;    APPLICANT:  Nielsen, Peter E.
;    APPLICANT:  Berg, Rolf H.
;    APPLICANT:  M llegaard, Niels E.
;    TITLE OF INVENTION:  HIGH ORDER STRUCTURE AND BINDING OF PEPTIDE
;    TITLE OF INVENTION:  NUCLEIC ACIDS
;    NUMBER OF SEQUENCES:  56
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Woodcock Washburn Kurtz Mackiewicz and No. 5641625ris
;      STREET:  One Liberty Place - 46th Floor
;      CITY:  Philadelphia
;      STATE:  PA
;      COUNTRY:  U.S.A.
;      ZIP:  19103
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/088,658
;      FILING DATE:  19930702
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/054,363
;      FILING DATE:  26-APRIL-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Lucci, Joseph
;      REGISTRATION NUMBER:  33,307
;      REFERENCE/DOCKET NUMBER:  ISIS-1052
```

TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-568-3100
TELEFAX: 215-568-3439
INFORMATION FOR SEQ ID NO: 52:
SEQUENCE CHARACTERISTICS:
LENGTH: 15
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
3-08-088-658-52

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 2.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 458 TCAACACTTCATGT 471
||||||| |||||
Db 14 TCAACACTGCATGT 1

RESULT 266
3-08-334-847-325/c
Sequence 325, Application US/08334847
Patent No. 5693532
GENERAL INFORMATION:
APPLICANT: McSwiggen, James
APPLICANT: Draper, Kenneth
APPLICANT: Pavco, Pam
APPLICANT: Woolf, Tod
TITLE OF INVENTION: METHOD AND REAGENT FOR
TITLE OF INVENTION: INHIBITING RESPIRATORY
TITLE OF INVENTION: SYNCYTIAL VIRUS
NUMBER OF SEQUENCES: 909
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/334,847
FILING DATE: No. 5693532ember 4, 1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 209/032
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 325:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
3-08-334-847-325

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 2.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1453 ACTTGTTTATTATG 1466
|||||| |||||||
Db 15 ACTTGTATATTATG 2

RESULT 267
US-08-317-432A-4
; Sequence 4, Application US/08317432A
; Patent No. 5710028
; GENERAL INFORMATION:
; APPLICANT: Nurit Eyal and Nir Navot
; TITLE OF INVENTION: A method of quick screening and
; NUMBER OF SEQUENCES: 50
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Mark M. Friedman c/o Robert Sheinbein
; STREET: 2940 Birchtree lane
; CITY: Silver Spring
; STATE: Maryland
; COUNTRY: United States of America
; ZIP: 20906
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 1.44 megabyte, 3.5" microdisk
; COMPUTER: Twinhead* Slimnote-890TX
; OPERATING SYSTEM: MS DOS version 6.2,
; OPERATING SYSTEM: Windows version 3.11
; SOFTWARE: Word for Windows version 2.0
; SOFTWARE: converted to ASCI
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/317,432A
; FILING DATE: 4-Oct-94
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/919,872
; FILING DATE: 27-Jul-92
; APPLICATION NUMBER: 08/084,505
; FILING DATE: 1-Jul-93
; ATTORNEY/AGENT INFORMATION:
; NAME: Friedmam, Mark M.
; REGISTRATION NUMBER: 33,883
; REFERENCE/DOCKET NUMBER: 128/7
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 972-3-5625553
; TELEFAX: 972-3-5625554
; TELEX:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 15
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-317-432A-4

Query Match 1.0%; Score 12.4; DB 1; Length 15;
Best Local Similarity 92.9%; Pred. No. 2.1e+02;
Matches 13; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1438 TTCTTGCTGGTTGA 1451
||||||| |||||
Db 2 TTCTTGCTCGTTGA 15

RESULT 268
US-08-311-486C-193
; Sequence 193, Application US/08311486C
; Patent No. 5811300
; GENERAL INFORMATION:
; APPLICANT: Sean Sullivan
; APPLICANT: Kenneth Draper
; APPLICANT: Kevin Kisich
; APPLICANT: Dan T. Stinchcomb
; APPLICANT: James McSwiggen
; TITLE OF INVENTION: RIBOZYME TREATMENT OF
; TITLE OF INVENTION: DISEASES OR CONDITIONS

```
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  193:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-193

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 2.1e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1043 ATTATTTATGTATT 1056
              |::|:::|: :|::
Db          1 AUUAUUUAUUUAUU 14


RESULT 269
US-08-311-486C-202
; Sequence 202, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/311,486C
;      FILING DATE:  September 23, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/166
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  202:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-311-486C-202

  Query Match             1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   28.6%;  Pred. No. 2.1e+02;
  Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1045 TATTTATGTATTTA 1058
              :|:::|: :|:::|
Db          1 UAUUUAUUUAUUUA 14


RESULT 270
US-08-311-486C-717
; Sequence 717, Application US/08311486C
; Patent No. 5811300
;  GENERAL INFORMATION:
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth Draper
;    APPLICANT:  Kevin Kisich
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  TNF-'
;    NUMBER OF SEQUENCES:  1157
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
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      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/311,486C
      FILING DATE:  September 23, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
    PRIOR APPLICATION DATA:  described below:                    two
      APPLICATION NUMBER:  08/008,895
      FILING DATE:  January 19, 1993
      APPLICATION NUMBER:  07/989,849
      FILING DATE:  December 7, 1992
    ATTORNEY/AGENT INFORMATION:
      NAME:  Warburg, Richard J.
      REGISTRATION NUMBER:  32,327
      REFERENCE/DOCKET NUMBER:  209/166
    TELECOMMUNICATION INFORMATION:
      TELEPHONE:  (213) 489-1600
      TELEFAX:  (213) 955-0440
      TELEX:  67-3510
  INFORMATION FOR SEQ ID NO:  717:
    SEQUENCE CHARACTERISTICS:
      LENGTH:  15 base pairs
      TYPE:  nucleic acid
      STRANDEDNESS:  single
      TOPOLOGY:  linear
S-08-311-486C-717

 Query Match              1.0%;  Score 12.4;  DB 1;  Length 15;
 Best Local Similarity   28.6%;  Pred. No. 2.1e+02;
 Matches    4;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Y       1043 ATTATTTATGTATT 1056
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D          1 AUUAUUUAUUUAUU 14


ESULT 271
S-08-292-620A-217
 Sequence 217, Application US/08292620A
 Patent No. 5837542
  GENERAL INFORMATION:
    APPLICANT:  Susan Grimm
    APPLICANT:  Dan T. Stinchcomb
    APPLICANT:  James McSwiggen
    APPLICANT:  Sean Sullivan
    APPLICANT:  Kenneth G. Draper
    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
    TITLE OF INVENTION:  DISEASES OR CONDITIONS
    TITLE OF INVENTION:  RELATED TO LEVELS OF
    TITLE OF INVENTION:  INTRACELLULAR ADHESION
    TITLE OF INVENTION:  MOLECULE-1 (I-CAM-1)
    NUMBER OF SEQUENCES:  2390
    CORRESPONDENCE ADDRESS:
      ADDRESSEE:  Lyon & Lyon
      STREET:  633 West Fifth Street
      STREET:  Suite 4700
      CITY:  Los Angeles
      STATE:  California
      COUNTRY:  U.S.A.
      ZIP:  90071-2066
    COMPUTER READABLE FORM:
      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
      MEDIUM TYPE:  storage
      COMPUTER:  IBM Compatible
      OPERATING SYSTEM:  IBM P.C. DOS 5.0
      SOFTWARE:  Word Perfect 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER:  US/08/292,620A
      FILING DATE:  August 17, 1994
      CLASSIFICATION:  435
    PRIOR APPLICATION DATA:
    PRIOR APPLICATION DATA:  including application
;     PRIOR APPLICATION DATA:  described below:                    two
;       APPLICATION NUMBER:  08/008,895
;       FILING DATE:  January 19, 1993
;       APPLICATION NUMBER:  07/989,849
;       FILING DATE:  December 7, 1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard J.
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  208/149
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;   INFORMATION FOR SEQ ID NO:  217:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  15 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-292-620A-217

  Query Match              1.0%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   35.7%;  Pred. No. 2.1e+02;
  Matches    5;  Conservative    8;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1049 TATGTATTTATTTA 1062
              :|:|:|:::|:: |
Db          1 UAUGUAUUUAUUCA 14


RESULT 272
US-08-292-620A-511
; Sequence 511, Application US/08292620A
; Patent No. 5837542
;  GENERAL INFORMATION:
;    APPLICANT:  Susan Grimm
;    APPLICANT:  Dan T. Stinchcomb
;    APPLICANT:  James McSwiggen
;    APPLICANT:  Sean Sullivan
;    APPLICANT:  Kenneth G. Draper
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  INTRACELLULAR ADHESION
;    TITLE OF INVENTION:  MOLECULE-1 (I-CAM-1)
;    NUMBER OF SEQUENCES:  2390
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/292,620A
;      FILING DATE:  August 17, 1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
```